MASTER'S THESIS

ARCHITECTURAL EXPERIMENTATION

JOHANNA HEDENSKOG



Johanna Hedenskog Master's Thesis 2025 Two Baths and a Lighthouse: A study on exposure and weathering

Architecture and Urban Design MSc Chalmers School of Architecture Department of Architecture and Civil Engineering Architectural Experimentation Examiner: Naima Callenberg Supervisor: Peter Christensson

All work within this document is produced by the author unless otherwise stated.

CONTENTS

Acknowledgements		04
Abstract		06
Student background	· · · · · ·	80
Introduction		
On drawing		
Glossary		12
Purpose		13
Thesis question		14
Delimitations		15
Conditions		
The hand drawn		16
Positioning		
On weathering		
Thirteen Watchtowers		22
Fragility		
The unmeasurable		
Frangetur		
č		
Documentation		
Two truths and a lie		28
I take my bike to the sea		
Staining		
Erosion		34
Two Baths and a Lighthouse		36
Gustafsberg		38
Lysekil		
Stångehuvud	· · · · · ·	60
Interlude		
Speculation		66
The Crying Lighthouse and Other Stories		70
Reaching a Lighthouse		70
Water and Iron		
Wave		
The Crying Lighthouse		
D:		
Discussion	• • • •	88
References		
Bibliography		90
Drawings		
Figures		
Appendix		
Exhibition		
Models		
Study trip		
coaj mp		

ACKNOWLEDGEMENTS

For showing me the slowness and care in architectural conservation, I would like to thank Jenny and Scott.

My friends and the girls in the feedback group, for companionship, ideas and thoughtful critique.

Hélène, for kindly contributing with photos and insights into the fragility of the human condition.

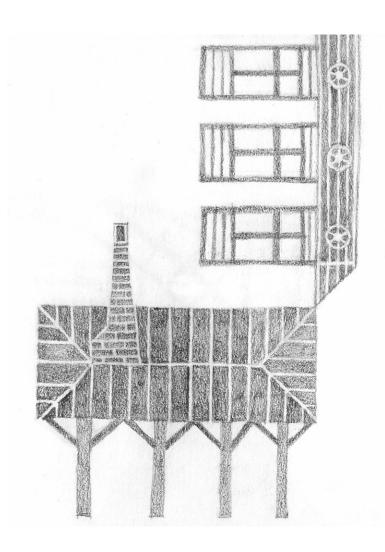
My gratitude to Edith och Egon Plomgrens fond for enabling my study trip in Bohuslän.

And, the biggest thank you of all to Peter, for the generosity of sharing with me your endless library of books, supply of materials, stories, cameras and not least dedication, which have made this work a great deal more rich.

"Tror du man släcker en fyr, sa pappan. Om någonting är säkert så är det att fyren brinner. Det finns vissa saker som är absoluta, till exempel havsströmmar och årstider och att solen går upp om mornarna. Och att fyrarna brinner."

1. Translated as: "Do you think one would extinguish a beacon, said the father. If anything is sure it's that the beacon is burning. Some things are certain, such as ocean currents and seasons and that the sun rises in the mornings. And that the beacons burn."

(Jansson, 1965, p. 32)



ABSTRACT

keywords: exposure, narration, perception, speculation, weathering

By challenging conventional methods of architectural design and developing a critical narrative, this thesis argues for a shift in the general perception of weathering, moving toward a more nuanced approach to visual 'unsightly' deterioration. It closely studies the effect of environmental exposure on the Bohuslän coast, where the rocky and bare landscape leave buildings to the elements, and speculates on design implications to find applications and encourage reflection on the observed findings.

This thesis is contextualised in the professional and public perception of architectural weathering, focusing on staining and erosion, which are generally agreed as detrimental processes to be prevented. In parallel with theoretical reasoning on conservation, architectural theory and artistic method, these phenomena are studied in great detail through hand drawing and analog photography. The documentation phase is grounded in the study of three sites: Kallbadhuset in Lysekil, the old health resort Gustafsberg and the lighthouse Stångehuvud in Lysekil. The detailed study of these locations has formed the basis of a material catalogue, illustrating how wood, metal and stone can react to elemental exposure, and defining valuable moments. Reference to photographic practice strengthens the analysis of the illustrated scenes by formulating narrative interpretations.

The argumentation is translated into a critical narrative proposing how decay could be a desired outcome of design. The framework of speculative design is defined and forms the parameters of the exploration. The design critiques prevailing approaches to architectural weathering and finds ornamental and narrative value in the decay that occurs in the meeting between two different materials and water or wind. The rust stain created by the intermittent dripping of rain water on a wall becomes one of the characters in a story about the fragility of existence. In this speculative universe with unconventional plot drivers, the exploration in this thesis goes beyond the description of the world as it is and begins to ask questions about how it could be, and in what ways architecture can be a catalyst of change.

This thesis builds an argument for the perception of visual deterioration of architectural materials as a valuable process of finishing buildings. It suggests how perception can be altered with the use of analog documentation techniques to visualise architectural narratives of weathering. It has done so by redefining architectural, artistic and conservation theories and methods and landing in a speculative critique of established practice.



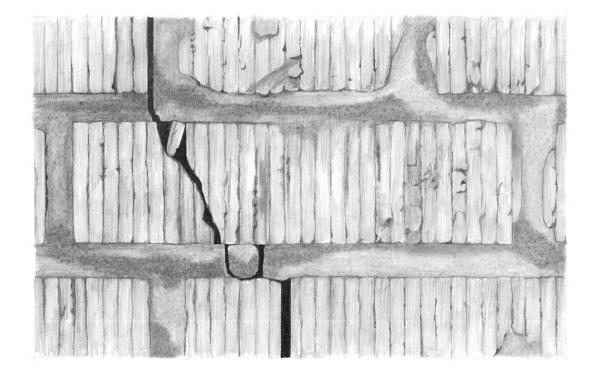
STUDENT BACKGROUND

Johanna Hedenskog

2018-2022	University of Edinburgh Architecture MA (hons) ARB/RIBA Part I
2022-2023	Simpson & Brown, Edinburgh Architectural Assistant Part I
2023-2025	Chalmers University of Technology Architecture and Urban Design MSc

Contact +44 74 14 76 22 26 +46 72 350 27 65

johannahedenskog98@gmail.com



Drawing 1. Crack through the bricks and mortar on the east facade of Valhallabadet. Scaled down to 1:2, original at 1:1. Gothenburg, April 2024.

ON DRAWING

ON DRAWING

There was a crack in a brick wall and someone said, this wall is unstable, we should take it down. The crack was a sign of failure, of weakness, justification for deconstruction. I looked at the crack in the brick wall and I saw seventy years of gravity weighing down and slowly tearing the brittle material apart. The crack on the north-east corner took the path of least resistance, first through the mortar alongside the brick. As it grew down toward the ground, it found resistance, a brick up ahead with unforgiving density. The crack tried to continue its course straight down as it had been, but it was diverted diagonally instead and taken off route. As it reached the bottom of the brick, it could no longer go through the mortar, that possibility was gone. But faced with a new found courage, the crack decided to try going through the brick again. This time, it found a weak point and went for it full force. To its delight the brick relented and allowed the crack to pass through in a clean line. I started drawing to capture this story.

GLOSSARY

Decay

Gradual and detrimental damage to material through exposure to the elements and to atmospheric pollution.

Erosion

Process or consequence of weather action by waves, rain or wind on ground elements and materials derived from ground elements.

Narration

Temporal representation of actions in the telling of a story, as opposed to the static representation of objects through description.

Speculative design

Design with the aim of provoking thought or change by proposing alternative realities.

Staining

Process of something leaving a mark on something else, which may be hard to remove. In architecture often caused by metal interacting with another material.

Weathering

Impact of water, wind and light over long periods of time causing change in colour and shape. Perceived as less detrimental than decay.

PURPOSE

"Ett häftigt oväsen väckte mig. Sovrumsfönstret ryckte hårt i stormhaken och vinden slet i rullgardinen. En vindfarm drog fram över hustaken. Havets röst ljöd över bergknallarna."

(Grundborn, 2012, pp. 9-10)²

The coastal landscape and its exposure to the temperaments of the weather has always fascinated me. I seek it out, looking for places that are difficult to access to get a moment alone with the elements. The waves crashing against the cliffs and the whistle of the wind against my ears clear my head, produce a silence that makes it possible to hear better. The world comes into focus and sharpens.

In this thesis I want to understand this complete fragility in the face of the elements through the close study of architecture scattered along the west coast of Bohuslän. I have documented the traces of water and wind on exposed facades, uncovering hidden narratives in the material. The documentation becomes the basis for a speculation on 'unsightly' architectural weathering and its potential for shaping design thinking. The purpose of this process is to question the perception of weathering and decay, with the aim of shifting the negative connotations that prevail.

^{2.} Translated as:

[&]quot;A violent commosion awakened me. The bedroom window tugged on the hitch and the wind tore on the blinds. A wind farm drov over the rooftops. The voice of the ocean resounded through the rocky landscape."

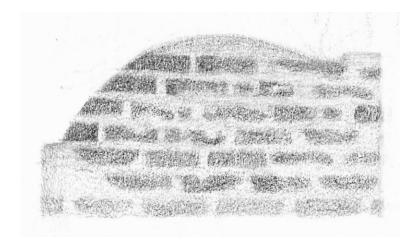
THESIS QUESTION

How can detailed documentation of exposed structures be used to shift the negative perception of 'unsightly' architectural weathering, approaching critical design through speculation on spatial narratives?

DELIMITATIONS

This thesis is both delimited and enabled by its speculative nature. It operates within a dimension of narrative commentary which succeeds reality and thus renders irrelevant traditional notions of style, orientation, flow of people and requirements of accessibility. It is formulated as an architecture for the elements, wherein human demands are relegated to secondary or even tertiary status, if you consider both the needs of the elements and that of the architecture itself to take precedence. All implied function relates to the narrative plot more than anything, and may thus not be taken more seriously than the story.

The theoretical argumentation is as much a part of the design as the drawings, all of which should be read through slow contemplation. The reading is to become worn, like the materials, smudged, like the drawings – scratched and earmarked without hesitation. The narrative is delimited only by our time, our willingness to invest in the stories told by these few buildings. Here they are told through pencil, paper, steel, stone and wood, but the true boundary it is attempting to push is in the translation to everyday observation, and in opening up our gaze to the stories that are found everywhere else.



MARKUSKYRKAN

CONDITIONS

THE HAND DRAWN

"To recreate with the pen's slight power, That which our hands could never build."

(Joachim du Bellay in Koudelka, 2020, p. 17)

In *Bild och Materialitet*, Bia Mankell (2013) makes the relevant distinction which in Swedish language naturally exists between the sketch (*skiss*), the hand drawing (*handteckning*) and technical drawing (*ritning*). The English word 'drawing' could be used as a translation for both *teckning* and *ritning*, thus the compounded formulation is required to elucidate the difference. The sketch may according to Mankell be categorised as a hand drawing while a technical drawing is an altogether separate medium. This separation lies in the intention of a technical drawing to present an abstracted prescription of something which will be constructed, meaning that the technical drawing is loaded with the anticipation of some resultant action originating in the drawing.

On the other hand, the sketch and the hand drawing may relate to reality through documentation of objects, movements, or to the imagination without any intention of materialising the subject. The technical drawing stands out through this anticipated materialisation, although it may also include other dimensions of reality such as documentation of the existing. A photograph, in this sense, is more related to the sketch or the hand drawing than to the technical drawing, as it is a representation of reality without the anticipated materialisation. But in comparison to the hand drawing, the photograph has a lower rate of selectivity, meaning that it is saturated with information. The term used in photography to describe information density is redundancy - described by Mankell as the inclusion of everything within 'the visible reality' (den synbara verkligheten) of the frame (2013, p. 195). In a photograph everything within the frame will be captured, whereas in a drawing the author is able to leave out anything considered irrelevant or distracting.

Mankell also points out the ability of the hand drawing to approach the likeness of a photograph through a high density of information. However, in contrast to the photographer, the illustrator retains the selectivity and is able to leave out or add details which tweak the message of the hand drawing relative to the photograph. This means that the two media will always be distinctive. The hand drawing is made through the capturing of small

movements of the pencil against the paper, whereas the photograph is an imprint of light on a surface. Mankell thus argues that the hand drawing is a continuous process in the eyes of the viewer, while the photograph depicts a static moment which happened in the past.

The necessity of implied prescription in technical drawing has been contested. Through analysing Sigurd Lewerentz's drawings of St Peter's Church in Klippan, both Jonathan Foote (2016) and Veronique Patteeuw (2020) argue that the architect constructs through drawing, rather than prescribing or instructing the builder in precisely how to construct. The bricks in Lewerentz's church are laid not according to the pattern drawn carefully on a piece of paper, with each brick given individual importance, but instead through the method established through the act of drawing – evenly and carefully laid horisontal lines establishing the precise height of the walls, with thick and uneven mortar joints on the vertical axis foregoing alignment and preserving each brick as a whole entity. Foote explains in his elaboration how:

"The drawing does not depict a general bonding pattern or even exactly where each brick goes, rather it re-enacts the making of the wall through an indexed practice of drawing each brick as though it were being placed individually along a mason's line. The slowness of this drawing technique opens the equivalent space of imagining the time-consuming construction of the brick walls."

(Foote, 2016, p. 79)

If Lewerentz's drawings of St Peter's Church construct reality with bricks, John Hejduk constructs reality with narration. He appears consumed by the question of reality and its revelation through drawing and photography, and attempted to find answers throughout his career. His conclusions were complex and deserve to be pondered in greater detail than what can be done here. Relevant to my development of method is his understanding of all representation as a distortion of reality, this including

all forms of architectural representation. Beyond constructing buildings, he manifested that architectural drawings, models, photographs and built structures together can construct narrative realities, and asked the question of whether understanding the real reality through representation is even a relevant proposition considering that distortion is inevitable.

"There are many kinds of architectural realities and interpretations of those realities, which include the major issue of representation or re-presentation. Whatever the medium used — be it a pencil sketch on paper, a small-scale model, the building itself, a sketch of the built building, a model of the built building, a film of the built building, or a photograph of the above realities — a process is taking place.

Some sort of distortion is occurring, a distortion that has to do with intuition as primal yearning, which, in turn has something to do with the interpretation and reinterpretation of space and all the mysteries the word space encompasses, including its spirit."

(Hejduk, 1985, p. 68)

The method of representation which I have developed combines the high redundancy inherent in the photograph both with the continuity of the movement of the hand drawing and the sketch as accounted by Mankell, and with the abstracted constructive nature of the technical drawing, as understood by Foote. The inclusion of a high level of realism in architectural technical drawing is not new, rather it is in some ways a return to historical methods of representation.

However, I am using the drawing to both capture and anticipate imperfections in a way that is rarely, if ever, done in architectural practice. The drawing is at once a hand drawn account of reality with a high redundancy approaching that of a photograph, while also an abstracted orthogonal technical drawing which tells something of a constructed future. A Hejdukian distortion of reality through architectural representation underpins the methodology of this design process, constructing narratives beyond the walls and ceilings proposed by the drawings and models. This method has been developed for the purpose of supporting the theoretical argument that weathering has architectural value, and is thus integral to the outcome of the design research process.









Drawing 2. The drawing process in grids, layers and textures. Scale 1:1. Gothenburg, September 2024.

POSITIONING

"Art has that particular irreverence towards accurate chronological sequence. It hops backwards and forwards upon the frame of time, playing hide and seek with the Historian's sense of propriety."

(Hejduk, 1985, p. 71)

The theoretical framework of this thesis spans between art, architecture and conservation. It understands architecture as an intrinsically artistic endeavour of creation and experience through tacit knowledge, memory and intuition. It seeks to understand, but also to animate the emotional impact of imperfection in materiality, that in a building which can be visually perceived.

In black and white photography, the contrast between light and dark become the sources of knowledge (Mankell, 2013). The architectural photographer Hélène Binet has through her career grown interested in finding beauty in imperfection through primarily black and white film photography. In her documentation of gardens in Suzhou, China, she works to capture narratives in the walls surrounding the gardens (Binet 2021). The frames create storyboards holding within them dramatically slow encounters between nature and the manmade.

In architecture, a building and its visual representation are the source of knowledge. Grounded in historic architectural analysis, Mohsen Mostafavi and David Leatherbarrow (1993) argue for a nuanced view on the deterioration of external materials due to weather exposure, than the one created and perpetuated by the modern movement from the early 20th century onwards. While Binet finds poetry in the slow weathering of those ancient walls, Mostafavi and Leatherbarrow understands materiality as decisive for facilitating narratives through natural aging.

Conservation is a field of art and architecture which demands great sensibility and sensitivity to the heritage values of buildings, but also to the tension between general values and values specific to the site and project. John Ashurst and Francis G. Dimes (1990) distills the principles of conservation down to five essential ones: Thorough documentation of the existing and of all changes made; the avoiding of falsification both of ornamental and structural elements; the reversibility, as far as possible, of conservation processes; retention and preservation before replacement; and lastly, the consensus that natural aging of the original and significant additions should not be concealed. These essential principles create the foundation of thinking throughout this work but they are applied to the design in a reversed order - starting from the decay.

The manner in which this thesis concerns art, architecture and conservation is fluid, moving between them without discernment of discipline. What takes the argument into a critical realm is the diversion from traditional documentation and design methods – the documentation is exaggerated to bring out weathering imperfections to a level of detail that a conservation architect would not do; the drawings are made orthogonally and to scale, made architectural, in a way that an artist would not do; the design speculates on fictional scenarios in a way that an architect would not do.

ON WEATHERING

"The law of ripolin: A coat of whitewash. We would perform a moral act: to love purity!"

(Le Corbusier, 1987, p. 188)

There are many causes of material deterioration, the main ones being air pollution, freezing and water damage. Wind is also a factor in drier areas (Brimblecombe, 2000). Research on decay and the public perception is well developed, and takes into account changes in material use tendencies from natural to artificial, lowering levels of certain pollutants and detailing of buildings. It shows that there is a general acceptance of a soil coverage up to 2%, and that a coverage above 5% is considered serious. There is also a difference between the perception of historic buildings, where a layer of patina is both expected and preferred as long as it is relatively uniform and of low contrast, and modern buildings which are made of complex material compositions. In general, decay that has caused uneven and obvious discolouration or changes in form is undesired and can even cause strong negative reactions (Brimblecombe, 2000).

"Finishing ends construction, weathering constructs finishes."

(Mostafavi & Leatherbarrow, 1993, p. 5)

In *On Weathering*, Mohsen Mostafavi and David Leatherbarrow (1993) position themselves at odds with this prevailing negative perception of weathering, and stress the visual processing of time on a building, its settling into its environment, as something to embrace rather than hide or attempt to resist.

They believe the modern movement shifted architectural design away from incorporating traditional architectural

elements aimed at slowing down the detrimental weathering of buildings, and instead invented new technical solutions and materials to prevent weathering altogether. The idea was that a standardised building should be able to persist in any location and climate, and hold the same level of comfort regardless of the season. Purity was the ideal aim of modernism. This was not always successful, as they show through examples such as Le Corbusier's *Cité de Refuge*, which has had to be altered to a great extent since completion due to unsuitable detailing.

To instead embrace the weathering process as a natural cause of a building's location and exposure is contrary to this modern tendency. But it is also not completely a return to the traditional way of building, with copings, sills and cornices embedded in the facade to lead water away. Mostafavi and Leatherbarrow (1993) outline the difference between 'sightly' and 'unsightly' weathering. Sightly weathering occurs in a perceived intentional manner, such as in the greying of a wood panel facade, or through the oxidisation of copper or corten steel. Unsightly weathering instead, occurs through failures to control the impact of weather, creating stains, scratches and cracks.

The two primary cases of unightly weathering is staining and erosion, the first being additive and the second being subtractive, in physical terms. These phenomena will become instrumental for understanding the documented material, and further, informing the speculative design process.



CONDITIONS

THIRTEEN WATCHTOWERS

"If this is architecture, it is a most curious kind, that virtually gives off a scent. Associations are evoked, and images, memories, uneasy anticipations."

(Schulze, 1981, p. 8)

John Hejduk (1929-2000) was an artist, architect and architectural theorist. He was inspired by theories about the human psyche and has been influential primarily through his paper designs – he has only a small collection of built projects. He worked within the critical realm, often presenting a pessimistic architectural narrative using characters and programmes as "poetic tools" (Correia, 2024, n.p.). He has experimented with a range of methods and tools of design representation, which makes it impossible to pinpoint his style. The *Thirteen Watchtowers of Cannaregio* (1974-1979) is a speculative urban project set in Venice. It can be characterised as an "architecture of pessimism" (Correia, 2024, n.p.), due to its dark view on the direction of societal development and the position of architecture.

The watchtowers are inhabited by one man each, and cannot be entered by anyone else until the men are replaced upon their death. The individual men are unimportant to the narrative, they simply act as

inhabitants of the towers which are the characters of the narrative. According to Schulze (1981), the towers are a "metaphor for alienation, psychic imprisonment and spiritual entropy" (p. 8). They comment on the detriment of physical and mental isolation from community – this is a paradoxical state as the towers are indeed watching over the town, and the input goes only one way. The men have no way of connecting with society and are destined to simply watch it until they die. This pessimism is not something I wish to replicate, but I find Hejduk's use of the fictional narrative as architecture to be fascinating. I believe it is an impactful way to critique the norm, and that it gives depth to the architecture.

I will have reasons to return to Hejduk's work continuously throughout this exploration, particularly as a reference to speculative design. His thinking and drawing have been influential also in less tangible ways, by opening up for what is possible to do with the medium of architecture.

FRAGILITY

"Never is one's past not present, nor is the individual's past ever cut off from the tradition of one's culture and the time of the natural world."

(Mostafavi & Leatherbarrow, 1993, pp. 112-116)

Hélène Binet (b. 1959) is a Swiss-French architectural photographer who works in London. She collects stories in the architecture, approaching each site with considerable sensibility to subtle details. Through this work she manages to describe not only the architecture, in fragments, but also the human condition by exposing fragilities that provoke reflection.

People are rarely present in her photographs, but there are traces there in the stairs, built for access, and the openings, built for enjoying the view. In her photographs of Korean architecture in *The Intimacy of Making*, Binet captures the honesty of the culture that shaped the buildings, through slow meditation on the softened stones and the wood grain. The photographs seem to comment on the quiet passing of time, which reveals layers of use and wear and weathering (Binet, 2021.1).

An even closer, more immediate connection with the elements is found in her work at the Suzhou Gardens, where she has captured the walls and their interplay with the plants and with light and shadow. The marks on the walls are the characters, they tell the story of the frailty of even the hardest of surfaces. She describes the experience of discovering the narratives as a turning point in the work at the gardens:

"I started to see the marks on the walls as desirable landscapes, something like painted reminiscences of secular rituals."

(Binet, 2021.2, p. 4)

The photographs create a surface on which to project dreams and memories, to complete the picture on one's own. Through her own discovery of moments within the built structures, she reveals the fleeting nature of existence and leaves the viewer aware of themselves, and perhaps with a lingering feeling of smallness.





"Like a cryptic fresco, the red water leaves ocher and rust coloured traces on the concrete wall, splashing a wide arch of brownish colour on the stone floor before disappearing into the narrow gulley."

(Zumthor, 2007, p. 162)

THE UNMEASURABLE

"Sometimes I can almost feel a particular door handle in my hand, a piece of metal shaped like the back of a spoon. I used to take hold of it when I went into my aunt's garden. That door handle still seems to me like a special sign of entry into a world of different moods and smells."

(Zumthor, 2006, p. 7)

Both Peter Zumthor (b. 1943) and Louis Kahn (1901-1974) have attempted to describe the origin of inspiration which shapes architecture. Zumthor reasons that architecture comes from memory, and that the architect is always in the pursuit of recreating an impression of the past in physical form (Zumthor, 2006). As exemplified with the aunt's garden door handle, a memory can open up to an experience that is multi-sensory and aspirational. The experience that will be recreated from this memory is not necessarily the shape of the handle, but what comes of the ritual of passing from one space to another. Kahn, on the other hand, believed that architectural creation occurs in the meeting between the unmeasurable and the measurable – which he rephrased as Silence and Light:

"Inspiration is the feeling of beginning at the threshold where Silence and Light meet."

(Louis Kahn in Lobell, 2008, p. 20)

To Kahn, the measurable is what can be found in nature, the material and tangible and that can be quantified. He equates the unmeasurable with poetry, meaning the qualities that cannot be defined by quantifiable means. I believe that in spatial terms, Kahn was talking about the experienced qualities of space which are almost or completely impossible to put words to, that which touches the core of existence. As such, both Zumthor and Kahn are both discussing the tacit dimension as the source of inspiration.

Tacit understanding is that which can cannot be spoken of, but can be shared subliminally by a group of people. As Nat Chard remarks, architecture is comfortable in the measurable realm, where representation can be understood and discussed (Chard, 2013). The drawing uses a language that can be translated without distorting its meaning – it is prescriptive of a future scenario or

descriptive of a built scenario. But as Chard explains, the way architecture is experienced is implicated through tacit knowledge. First, before any mark is made on a paper, the building exists as a blurry, undefined image in a projected thought by the architect. After it is drawn, it may have sharpened edges, but is still fragmented in its conception and may become subject to an onlooker's imagination. During construction, the building holds multiple ephemeral environments, as it is in constant metamorphosis. Once finished, its spatiality can be felt, and the experience of walking through it or looking out from a window is fleeting, we can understand the feeling but we cannot put words to it. We can sense its craftsmanship or its disingeniuity, and we can explain it, but we cannot put words to *how* we know.

Metaphors are an attempt at verbalising the experience of space, but to know the feeling of experiencing a space is not the same as the experience itself. When Gernot Böhme talks about his experience of crossing the threshold between the busy street and the inside of Cologne Cathedral, he describes himself "entering silence as if walking into a wall of fog" (Engels-Schwarzpaul & Mika, 2020, p. 141). We can relate this to our own similar experiences, but until we visit Cologne and enter the cathedral from the busy street, we will not share the tacit knowledge of this spatial experience with Böhme.

The implications of this rationale are relevant for architecture as a whole, but carry particular weight in the context of speculative design, where the aim is not to find an architecturally satisfying solution but rather to provoke thought and emotion. It also serves to deepen the understanding of the work of John Hejduk and Hélène Binet, which will be interpreted and felt differently depending on the viewer's perspective. In this work, the architectural provocation is narrative and open-ended, and a common agreement can therefore not be made with regard to its meaning.

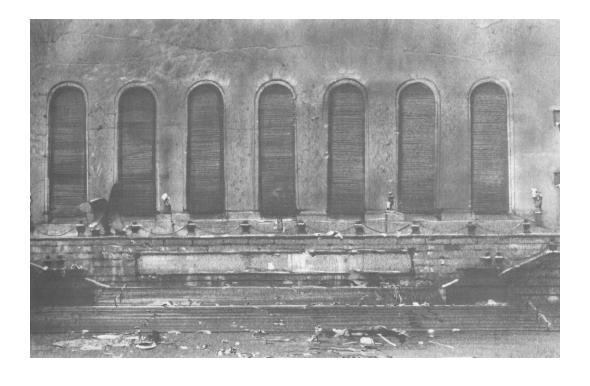


Figure 3. Göteborgs konstmuseums fasad. (Friberg, 1978).

FRANGETUR

frangetur (latin): third-person singular future passive indicative of frango (to break, shatter); will be broken

Humans are fascinated by the inevitability of our buildings slowly decaying. If one thing is certain, it is the ephemeral nature of all material things – including ourselves – and the crumbled stones in ancient ruins reminds us of this as much as the crack in a concrete wall that has settled. Coming to terms with the impermanence of order may seem a futile task, and it is certainly not uncomplicated. Here I propose the term *frangetur* to describe the assured fall into disorder that is architecture. In latin, *frangetur* is the future passive indicative derived from *frango*, meaning to break, and is used to describe that which will be broken. It may be a useful term for grouping possible causes behind 'the break', of which there are many. Frangetur acknowledges that all things will come to an end.

David Gissen (2009) understands the break through the term debris – the scattering of building elements to a point beyond recognition. This word is charged with violent connotations, whether it be intentionally inflicted by humans through warfare, or unsurmountable forces understood as natural disaster through geological movement and weather phenomena. Debris is unrecognisable matter created through explosive and indiscriminate force, while fragments retain some of the likeness of the structure it once formed part of and have been formed by a slower process of breaking. Ruins are collections of fragments which retain some of their spatial quality and can be examined as a whole.

The photographer Josef Koudelka understands ruins as a collection of fragments, that which is left after the debris and dust has been scattered by time. Ruins, as opposed to debris, can even be considered beautiful. They can be created by disaster, for sure, but also by intention – a slow deconstruction process which has been discontinued for some reason. In *Ruins* (Koudelka 2020), the archaeologist Alain Schnapp connects the picturesque attraction to the ruined building to the human condition

of fragility – seeing the impermanence of our structures is a reminder that everything that is will come to an end, just as everything that has been has come to an end. In the view of humanity, the ruin becomes an existential question:

"We are all attracted by ruins, whether we want to be or not, whether we admire, hate or simply try to disregard them. This is because none of us can escape our connection with the past."

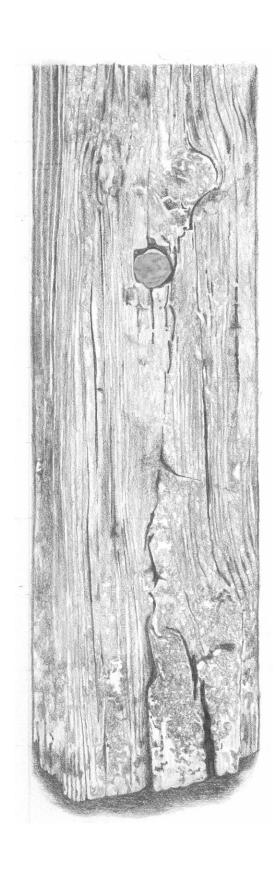
(Koudelka, 2020, p. 13).

If Gissen (2009) argues that the formation of debris is an acceleration of the ruination of a building, decay is the slow paced version of frangetur, and which affects all built matter. Decay through weathering is also the process by which ruins settle into nature, slowly returning to become part of the landscape on which they sit. Mostafavi & Leatherbarrow emphasise the ambiguity of this process:

"Subtraction leads to final ruination and intimates, therefore, the end of the building as it would be death of the figure. Aging, then, can be seen as either benign or tragic – or as both."

(Mostafavi & Leatherbarrow, 1993, p. 16)

This leads to the conclusion that all built structures must come to an end, whether slowly or instantaneously, either through decay, ruination, debris, or a combination of all of the above, and are therefore all subject to frangetur. The inevitability of this fragility may be experienced both with fascination and terror, but ultimately something which should be considered and accepted when interacting at any level with the built environment.

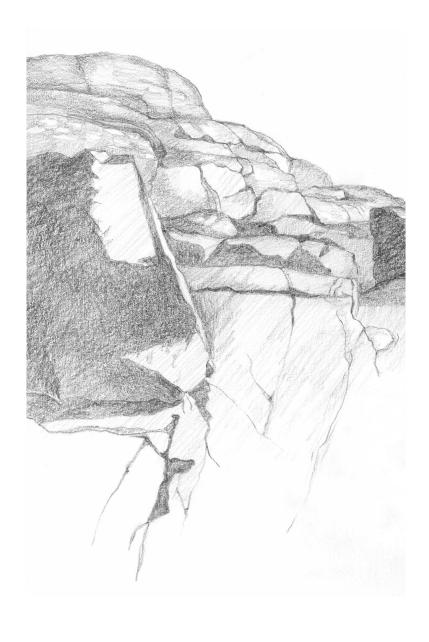


Drawing 3. Splitting at the bottom of a timber panel on a house in Johanneberg. Scale 1:1. Pencil drawing on paper, Gothenburg, October 2024.

TWO TRUTHS AND A LIE

Since I found the crack in the brick wall, I have been searching for the stories everywhere, compositions in stone, wood, brick and metal that contain a depth of narratives, characters and alternate endings. I search for peeled paint, rust stains, all kinds of cracks large and small, anything created not by intention but by allowing time to take out its right. I continued drawing because I was captivated by the plots contained in those walls. I found that with my pencil I could become the director of great little plays composed of several acts, making those stories come to life.

The drawing is a souvenir and a memory of a moment in time. Is it a dream? The drawing is two truths and a lie – it tells the story of the wall, yes, but it is also enhanced, highlighted, skewed. Because it is made by hand, there are mistakes in the drawing that diverge from reality. Therefore the scene it is based on becomes irrelevant as soon as the drawing is finished and takes on its own life, it becomes a base for interpretation, a piece of art. But it also points to the imperfection itself as an art piece by asking the viewer to look for a while, to find the story that is told to them through the pencil strokes. The drawing process tells one story to me, and another to the receiver. But the question in the message is the same – look closely, what do you see?



Sketch from Ganlet.

DOCUMENTATION

I TAKE MY BIKE TO THE SEA

It takes about forty minutes and much of the bike path runs alongside a busy motorway, tucked in between the cars and the trams. The path diverges to the west and I reach the windswept rocky landscape of the coast. The contrast between the petrol infused air on the way there and the gentle salty breeze is transformative. I feel instantly restored, calm, clear headed.

In the mid-19th century the healing properties of the west coast air was a science. Carl Curman was one of the champions of recreation along the coast, and he closely studied the properties of the air in Lysekil to understand its effect on people's wellbeing (Lind, 2004). Health resorts appeared in Halland, Gothenburg and Bohuslän, but also on the other side of the country. Still, it was well understood that the saltier the water, the greater was the effect on the bathers' health. Bathing in the salt water was considered not only to prevent illness but it was used also to provide treatment of ill patients suffering from all kinds of symptoms, mental and physical. Bathing was a ritual of health, supervised by a doctor.

Today, the heritage of these health resorts and the scientific discoveries remain in our subconscious. It is easy to understand why the bathing culture gained momentum on the west coast, and I am not in a position to speculate on the medicinal properties of salt air and water. However, I do know that the peace I feel by the coast is therapeutic and that this feeling is shared by others. The feeling of connecting with nature, of being in the middle of something greater, of a silence that fills your entire being.

"Stor och långsam vind från havets bibliotek. Här får jag vila."³

(Tranströmer, 2004, p. 87)

The people visiting the health resorts and finding rest in their peaceful environments were wealthy, able to travel across the country and pay for their stay in the lavish estates and bathe in the palace-like structures that had emerged on piles in the sea. Lysekil became known as the 'Stockholmers' bath', and the bath at Särö was regularly visited by royalty (Lind, 2004). The business of bathing for wellness was not available for everyone. Along the coast in Bohuslän, the sea was nevertheless a way

of life, and its wonders and perils were well integrated in the mindset of its inhabitants. Living by the sea and working on it means that all its wilfulness, grandeur and indifference shaped the existence of fishing communities. Instead of the peaceful, remedial impressions of the health resorts experienced by visitor, life by the sea is portrayed as harsh and unforgiving, at mercy of the elements and the turn of the seasons:

"Åren komma och gingo. Tistelöns orubbliga klippmassor badades som förut av Kattegatts salta böljor, och de rasande höststormarna kastade årligen nya vrak till dess stränder."4

(Flygare-Carlén, 1842, p. 36)

The sea is angry – raging – persistently, devouring life and spitting out the bones of those who dared to defy its will. Together with the global westerly winds the sea takes out its wrath on its people, those who rely on it for their sustenance and their livelihood.

There is something particular about the west coasts I have visited – Norway, Portugal, Sweden and Scotland – weather there appears more extreme. The rain is more persistent, wind more violent, the waves are higher and the fog lays a blanket over the horizon. Coast lines have been torn apart, forming patches of islands, archipelagos where particular ways of life have emerged.

The wind is habitual, it follows the same entrained pattern across the globe as it always has (DeBlieu, 2015). There are three fundamental global patterns which are mirrored on at the equator: polar easterlies, prevailing westerlies and tropical easterlies. In Europe a prevailing wind originating in the south-west to west shapes the weather, the landscape and the life it holds. The wind enters land from the sea, and the western coasts are its first encounter, it conspires with the salty water, forming waves which polish rock masses laid bare at the shore.

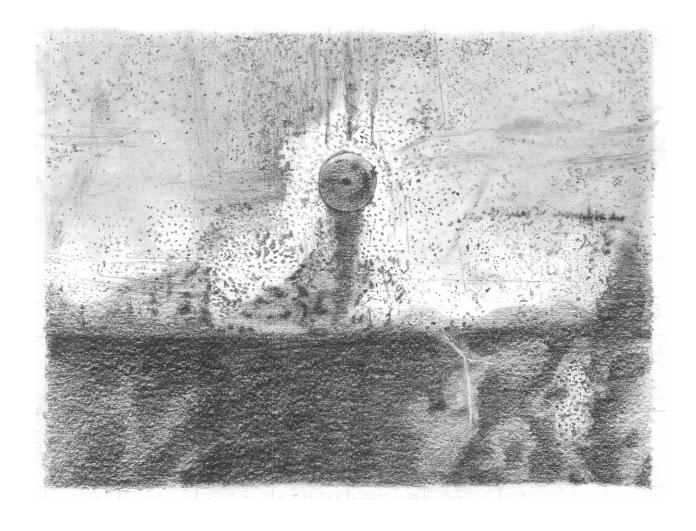
"I live in a land of great wind, and it defines me... Nothing on earth so cleanses my mind or pushes me so near the brink of my physical limits. Nothing else so reminds me of God."

(DeBlieu, 2015, p. 261)

^{3.} Translated as:
"A wind great and slow from the sea library. Here I get to rest."

^{4.} Translated as:

[&]quot;The years came and went. The thistle island's settled scrolls of rock were bathed as before by Kattegatt's salty billows, and the raging autumn gales annually spewed new wrecks on their beaches."



Drawing 4. The rusting of a metal door on a shed in Penicuick, Scotland at the joint between screw and material. Scale 1:1. Pencil drawing on paper, Gothenburg, October 2024.

STAINING

Rusting is a grievance for any mechanism which relies on movement, or to any process that demands integrity. Simplified, rust is the oxidation of metal which occurs in the contact of iron with air and water. In scientific terms it is called corrosion, and since industrialisation it has been in a continuous war with engineers who have developed effective weapons to fight it such as stainless steel and galvanisation. In the architecture industry we have learned to find beauty in controlled rusting and enthusiastically cover our facades in weathering steel, or corten as the rusty cladding material is more commonly known as.

Staining occurs at the meeting of two materials, one of them often being a metal. Contrary to the controlled weathering of corten, stains are usually unintended and undesirable outcomes of weathering. As much, John Ashurst and Francis G. Dimes could establish in their comprehensive publication on the conservation of stone buildings, *Conservation of Building and Decorative Stone:*

"What is well known is that the stain produced [by corrosion] can be more intense than any other common stain on masonry and is more difficult and sometimes impossible to remove. Hence every reasonable effort should be made to avoid its occurrence."

(Ashurst & Dimes, 1990, p. 163).

The dislike of staining appears to be a phenomenon throughout urban history. Nevertheless, there is evidence that the rate of deterioration due to corrosion is decreasing, and therefore also staining - this is caused by the decrease of pollutants in the atmosphere (Brimblecombe, 2000). It can therefore be assumed that we are now exposed to less staining than those living in coal-sooted Victorian London. There are many examples accounted for by Brimblecombe, who is a chemist, of architects and poets alike grappling with the staining of stone buildings. A conclusion that was drawn from the application of stone treatments on the reconstructed Houses of Parliament, built between 1840-1876, was that leaving the walls to decay was often less harmful than the cocktail of various oils and silicates that were tested on them (Brimblecombe, 2000).

According to the studies carried out by Brimblecombe, we are more inclined to accept staining on historic buildings, as long as it is relatively even, because it indicates the building's age and thus its heritage value. The building starts to appear dirty only when the staining is too dark, too widespread, or stands too much in contrast to the unstained surface – these sensitivities have been measured quite precisely. In modern buildings, which are characterised by smoother surfaces and polymers, stainless metals and glass, the perception of stains might be different, since we don't have the expectation that they should show signs of age.



Drawing 5. The delamination of sandstone at the meeting with the ground at Edinburgh College of Art. Scale 1:1. Pencil drawing on paper, Gothenburg, October 2024.

EROSION

Where staining is additive, erosion implies the subtractive wearing away of surface material on a structure, which happens slowly and persistently by exposure to water and, to a lesser extent, particles carried by wind.

Erosion can in some sense be considered more detrimental than staining, as material is irreversibly lost and can lead to weakening the structural integrity. While staining is to some extent accepted as patina, erosion suggests a failure in the composition of the building materials leading to its destruction. Such is the case where cement mortar has been used in stone masonry, leading to faulty expulsion of water through the porous stone and gradual, detrimental loss of material.

But stone does inevitably erode, and in the northern hemisphere this is most often due to rapid changes in temperature creating frost damage. The change in volume caused by the freezing of wet stone can cause delamination (Brimblecombe, 2000). This is undesirable as the surface is weakened, leading to cracks and detachment of large parties of stone.

In traditional stone building, detrimental deterioration due to water drainage was preempted with the use of sacrificial weatherings such as sills, cornices and copings, ornamental elements which gave the external facade both depth and protection (Mostafavi & Leatherbarrow, 1993). These smaller elements are more readily repaired and replaced than the walls they guard. With reference to historical weathering methods such as this, selective erosion can be both designed for and embraced.



TWO BATHS AND A LIGHTHOUSE

Three locations have been chosen for study with the purpose of gathering documentation. They were chosen based on their exposed placement on the edge of the water along the coast of Bohuslän, without protection from weather, wind and salt water. In detail I have studied the old health resort at Gustafsberg in Uddevalla, *Kallbadhuset* in Lysekil and the Stångehuvud lighthouse in Lysekil.

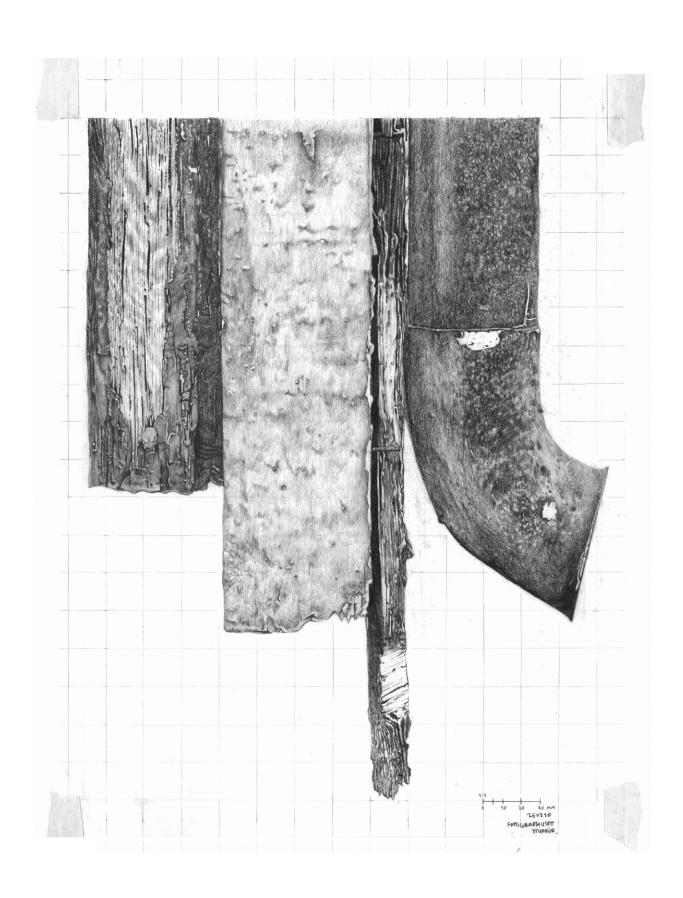
The title of this exposition is in itself deceptive on the grounds that there are actually three bath houses included in the study: the Gustafsberg location has two baths – the old warm bath *Varmbadhuset* and the old bath for the impoverished *Fattigbadhuset*. Neither is still in use as a bath today, but the site of Gustafsberg remains significant as one of the oldest health resorts in Sweden. All buildings in this case study are coincidentally timber structures, and are all generally well maintained.

Only Kallbadhuset in Lysekil is still being used for its intended purpose, after having gone through several renovations, most recently extended with a sauna for added comfort and extended seasonal use. The Stångehuvud lighthouse was decommissioned in the 1970s but the old lantern can still be seen, extinguished, through the windows. The Gustafsberg buildings now form a hostel complex. However, there is a bookable sauna in the old Varmbadhuset which retains some of the building's original function and activates the small beach inside the boat pier.

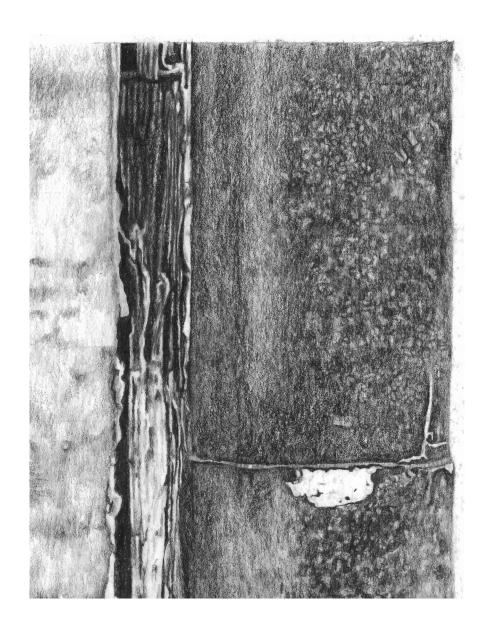
GUSTAFSBERG



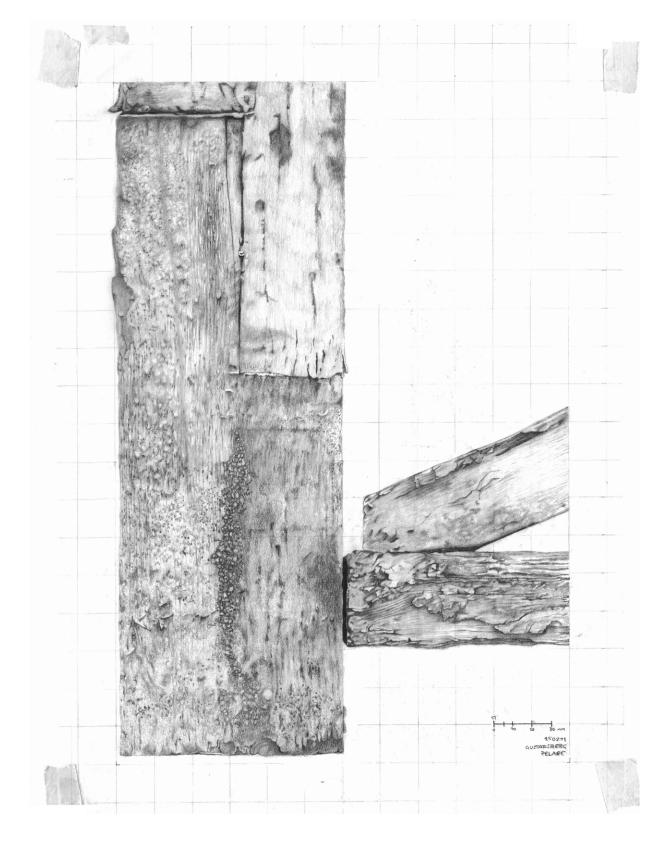




Drawing 6. Detail of corner and downpipe on the north western facade of Fattigbadhuset. Left: Scaled down to 1:2. Right: Fragment at original scale of 1:1. Pencil drawing on trace, Gothenburg, February 2025.

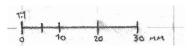


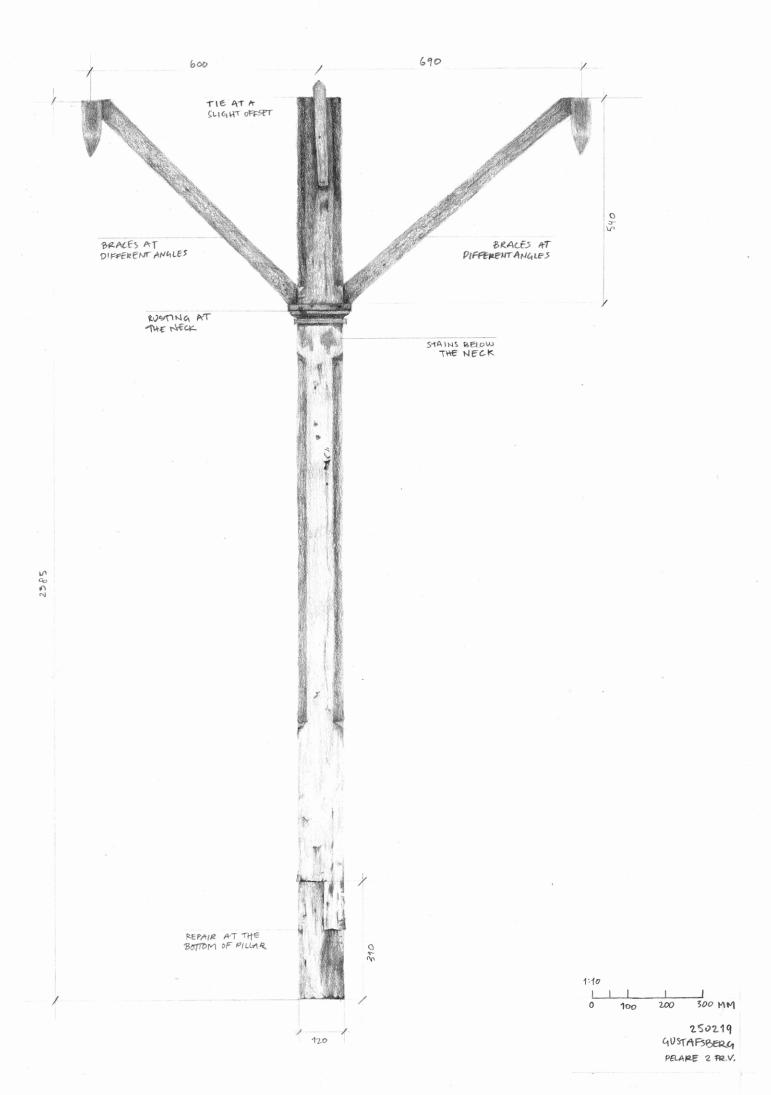


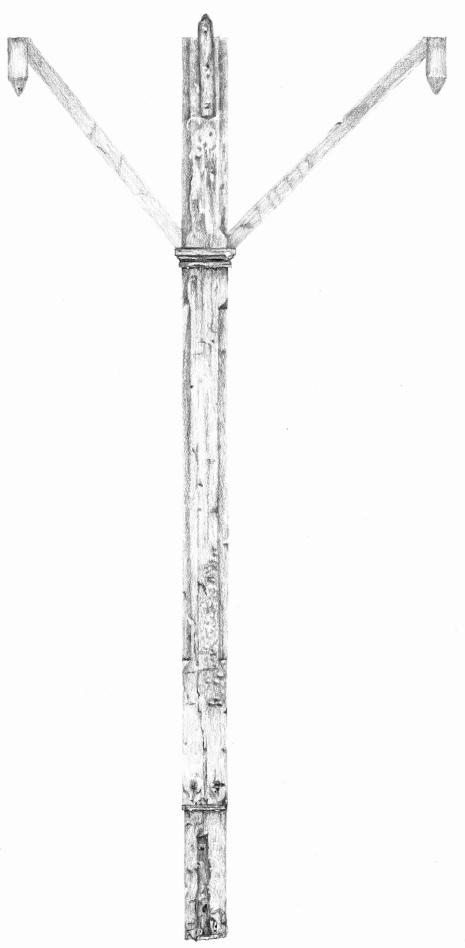


Drawing 7. Detail of pillar base repair on the northern facade of Varmbadhuset. Left: Scaled down to 1:2. Right: Fragment at original scale of 1:1. Pencil drawing on trace, Gothenburg, February 2025.

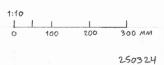






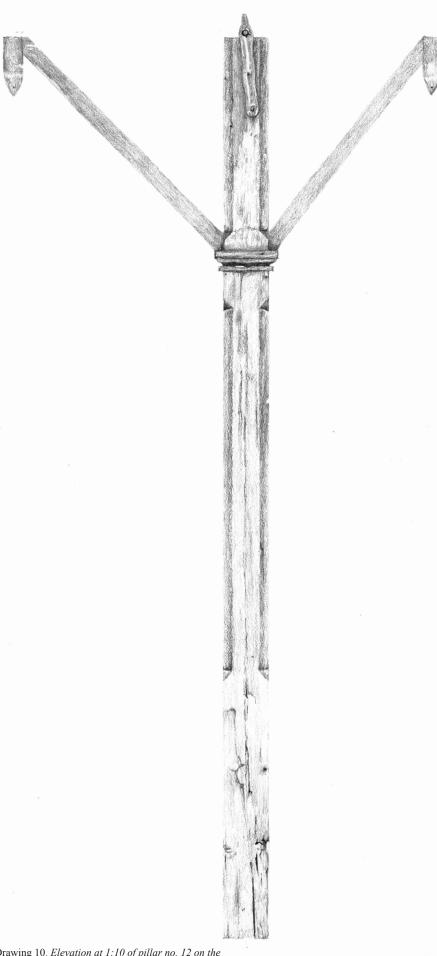


Drawing 9. Elevation at 1:10 of pillar no. 8 on the northern facade of Varmbadhuset. Pencil drawing on cartridge, Gothenburg, March 2025.

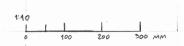


250324 GUSTAFSBERG

PELARE 8 FR.V.



Drawing 10. Elevation at 1:10 of pillar no. 12 on the northern facade of Varmbadhuset. Pencil drawing on cartridge, Gothenburg, March 2025.



250324 GUSTAFSBERG PELARE 12 FR.V.

LYSEKIL



28 februari 2025, 17:26, Lysekil

Yesterday I decided to use today for a field visit. When I woke up in the morning the sun was shining in Gothenburg and the sky was completely blue. I thought, oh no, the photos will be too cheerful. But as the bus inches closer to my destination, Gustafsberg, and I look out over the fjord, I realise a milky skin has spread over the sky and turned it a somber white.

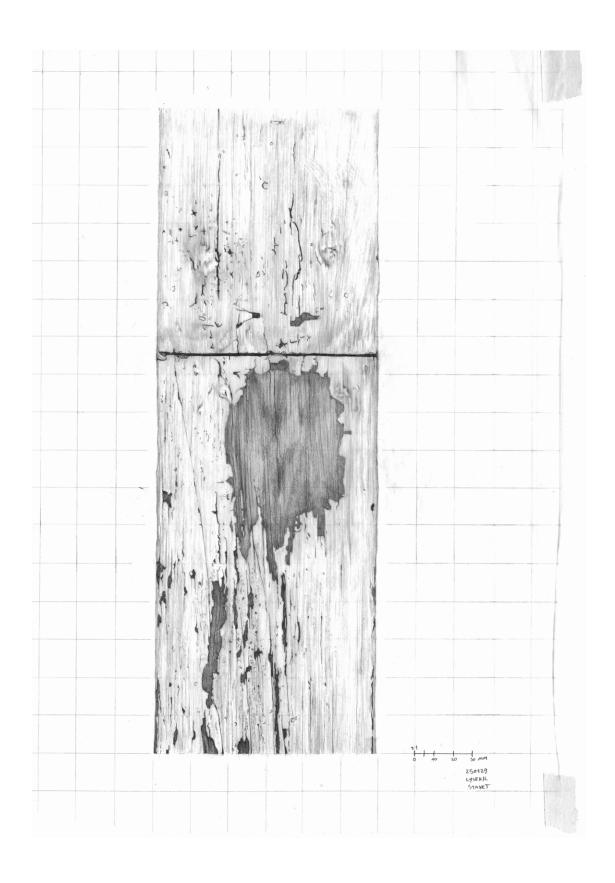
Back on the bus from Uddevalla the sun tried to peek out through the clouds but to be sure the harbour in Lysekil was again coated in a dampened haze when I arrived. I could happily begin my work, and as I did so the horizon slowly fell into the sea, drowning with it the land masses across the water. On the bus back to Gothenburg the sun broke through the fog and cleared the sky just in time for the sunset.







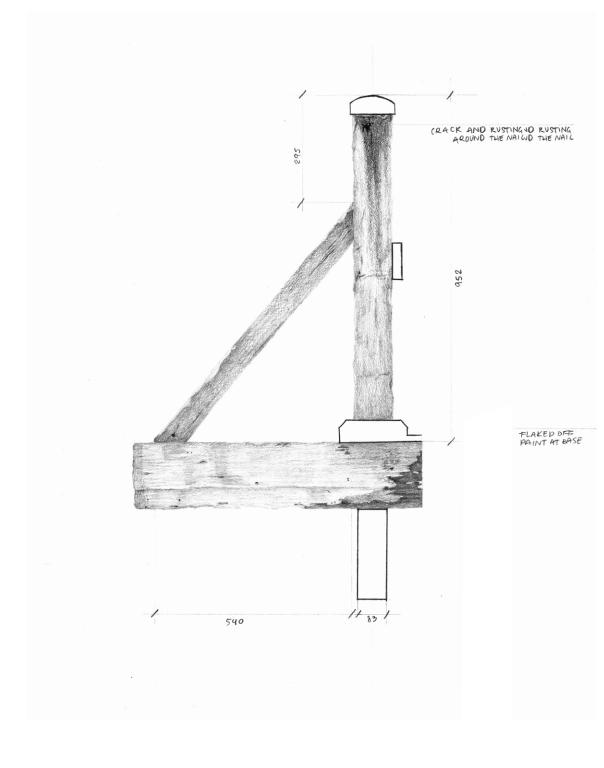
Two photo montages from Lysekil. Top: East facing facade. Bottom: North facing facades.



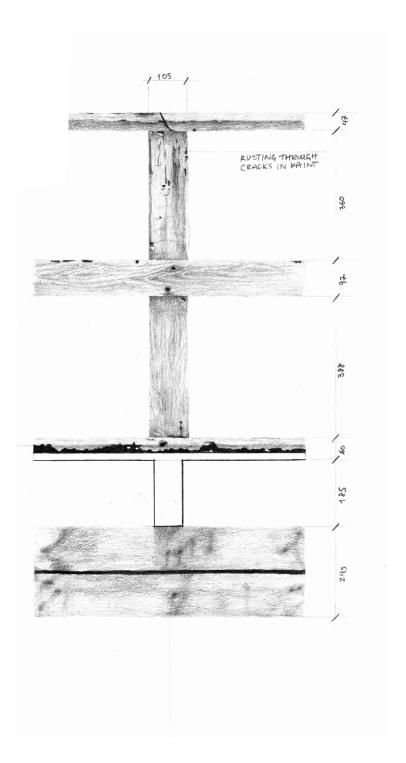
Drawing 11. Detail of peeling paint on the hand rail on the north western facade. Left: Scaled down to 1:2. Right: Fragment at original scale of 1:1. Pencil drawing on trace, Gothenburg, January 2025.

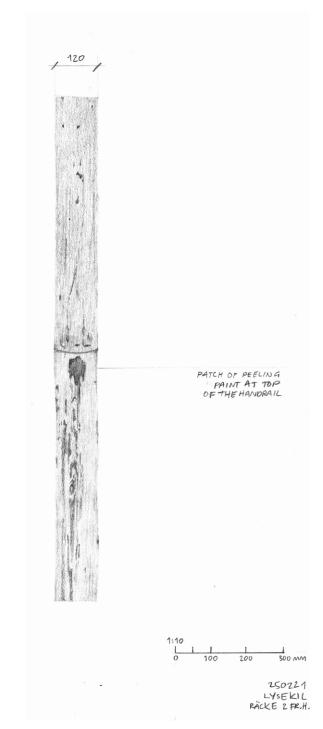




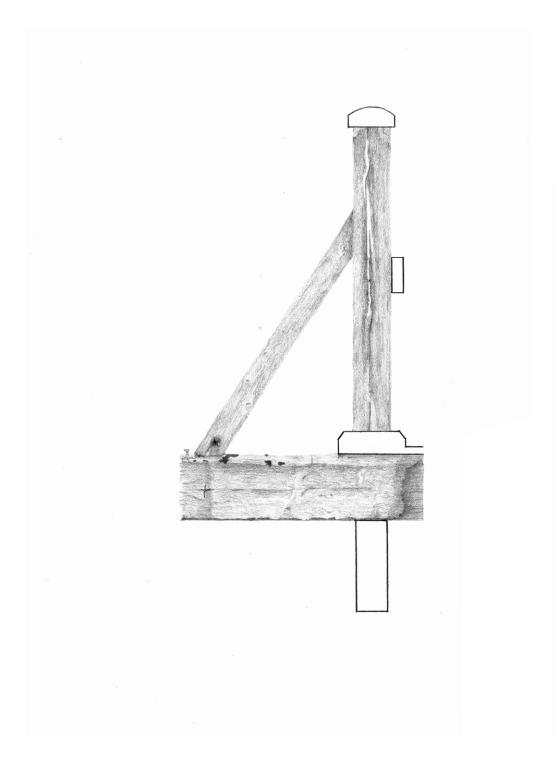


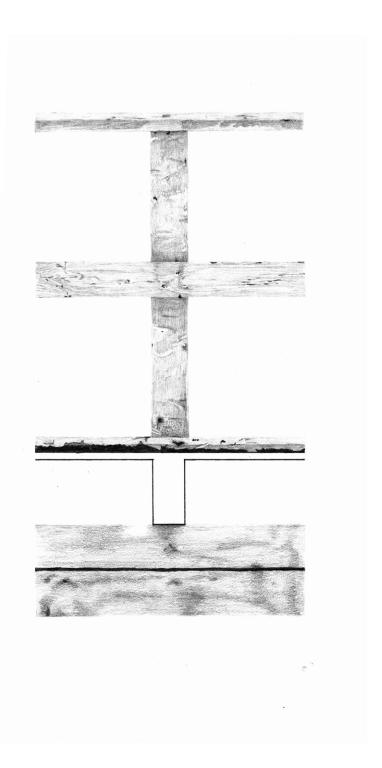
Drawing 13. Fence post no.2 on the north western facade drawn in section, elevation and plan at 1:10. Pencil drawing on cartridge, Gothenburg, February 2025.

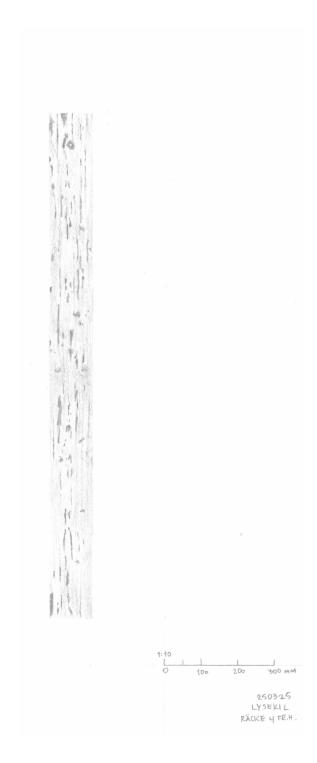


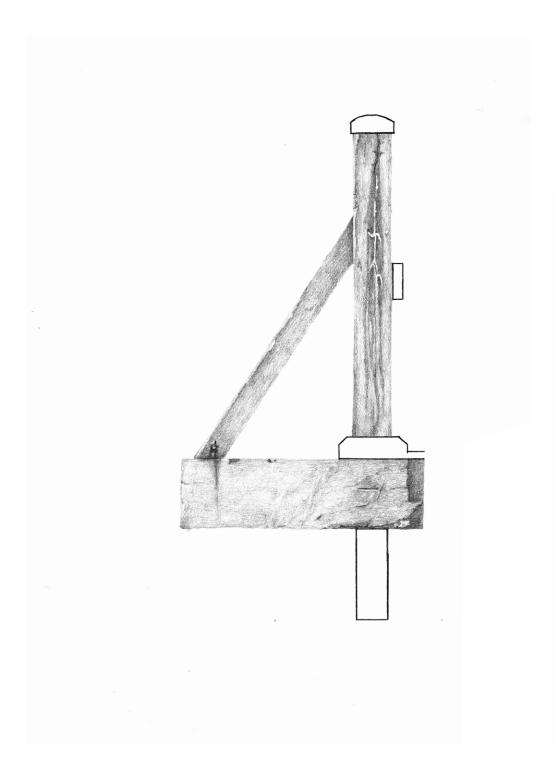




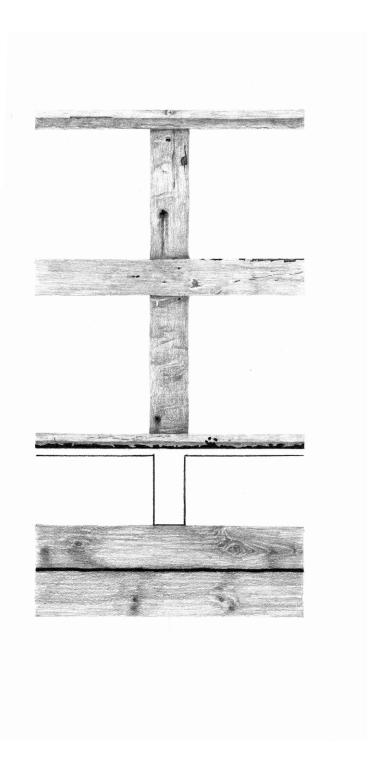


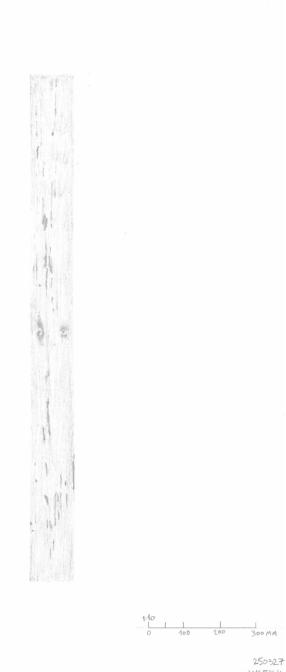






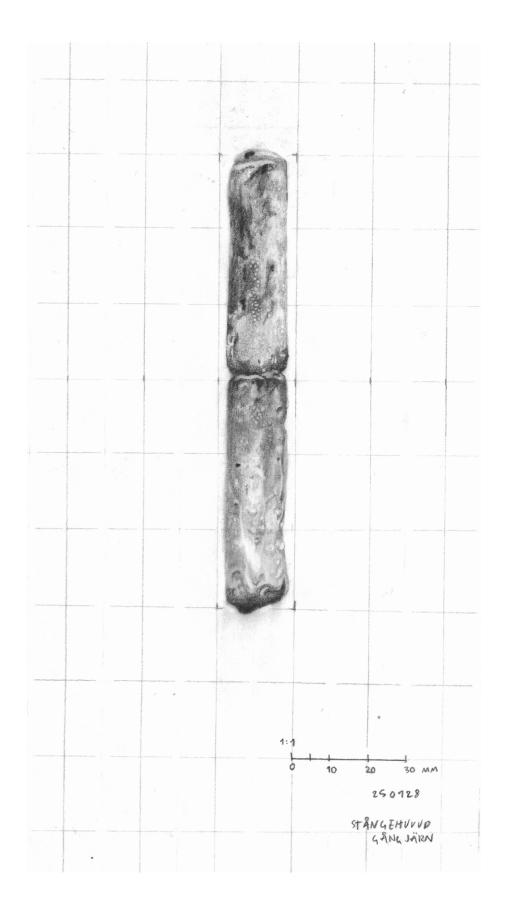
Drawing 15. Fence post no.6 on the north western facade drawn in section, elevation and plan at 1:10. Pencil drawing on cartridge, Gothenburg, March 2025.



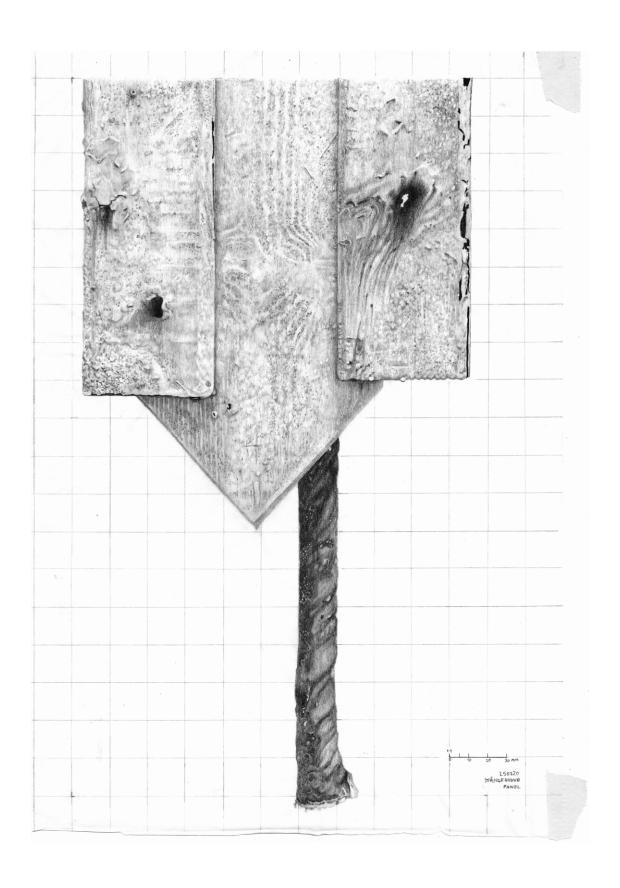


STÅNGEHUVUD



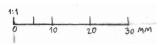


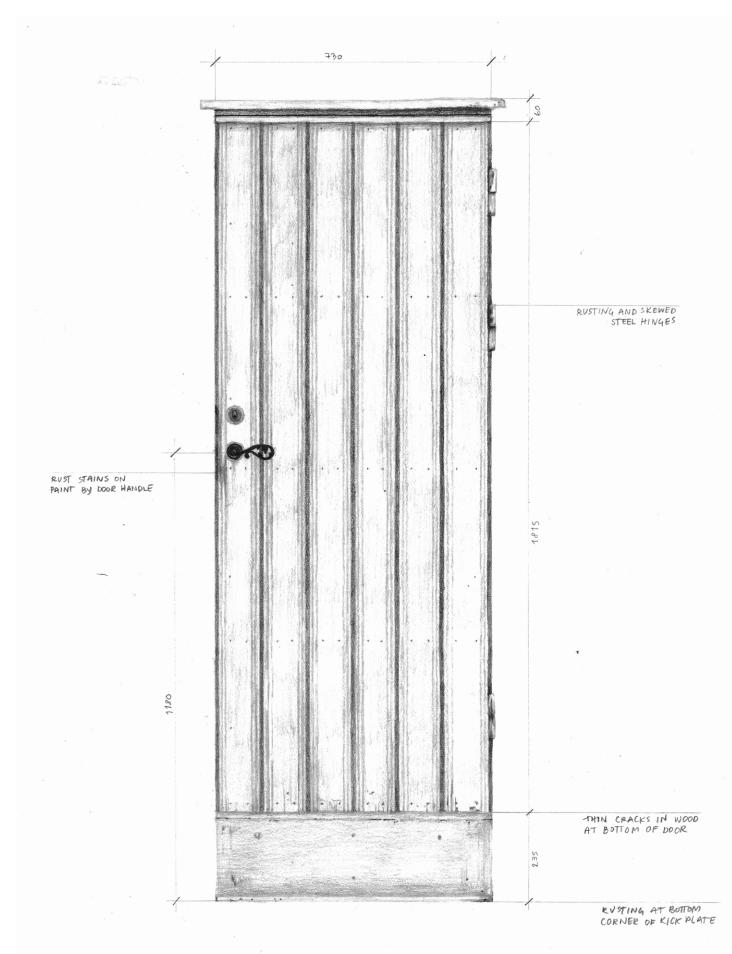
Drawing 16. Detail at 1:1 of door hinge on the eastern side of the lighthouse. Pencil drawing on trace, Gothenburg, January 2025.



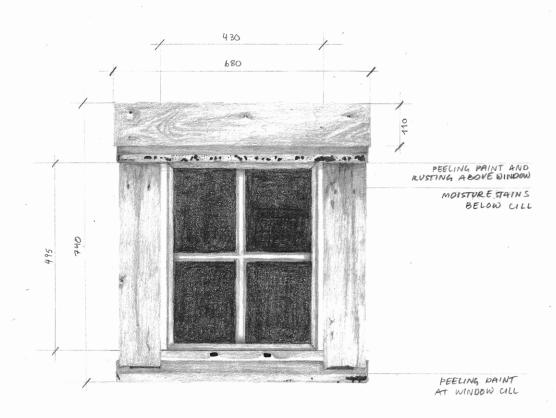
Drawing 17. Detail of timber panel on the western facade as it meets the ground. Left: Scaled down to 1:2. Right: Fragment at original scale of 1:1. Pencil drawing on trace, Gothenburg, February 2025.





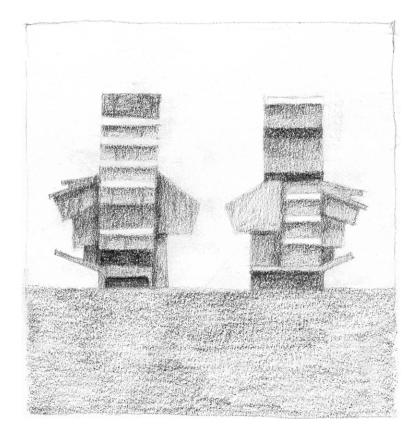


Drawing 18. Elevation of door on the eastern facade and window on the western facade at 1:10. Pencil drawing on cartridge, Gothenburg, February 2025.





250227 STÅNGEHUVUD DÖRR + FÖNSTER



INTERLUDE

SPECULATION

"I cannot do a building without building a new repertoire of characters of stories of language and it's all parallel. It's not just buildings per se. It's building worlds."

(John Hejduk in Hays, 2002, n.p.)

The documentation of stains, cracks and other 'unsightly' imperfections has been formative for the narrative outcome. I hesitate to call it a design proposal, but I suppose it is spatial and therefore architectural. It's not a proposal, however – the design is intentionally bad with leaky pipes, poor drainage and a questionable structure. In this capacity it is a speculation on how an architecture that is made for and left to the elements might be formed by taking the everyday decay and amplifying its effect and presence. The approach to speculation here is through spatial narration, using the architecture as the narrative driver. It borders reality and unreality without setting itself within a timespan or defining its social context.

Speculative design is a term first defined and applied by Anthony Dunne & Fiona Raby in the 1990s. In their reasoning on the 'A/B' manifesto created as a speculative framework, they describe speculative design as a medium for asking questions rather than providing answers. The A/B manifesto is a simple list with two columns, one containing key words shaping the commonly used design process, and the second the speculative one. Bases for the common design process in the A-column are, for example Problem Solving, Design for Production, The 'Real' Real, and Makes Us Buy, where their direct speculative equivalent in the B-column are Problem Finding, Design for Debate, The 'Unreal' Real and Makes Us Think (Dunne & Raby 2013, p. 8). The manifesto makes clear that design created for how things work will reinforce existing conditions, and thus for any change to take place the designer has to shift the parameters toward an imagined world that is different from one's own. The design is used as a starting point for conversation and discussion, with the understanding that a correct and functional solution is not the goal.

The intermediary between the real and the unreal is seen by Dunne & Raby as the space for effective speculation to take place. In this in-between, a world can be build in which an audience can recognise themselves, but at the same time push the boundaries of reality beyond what we know. In other words, in order for speculative narratives to be understood, they must contain both unreal and real dimensions. They believe this approach creates a more immediate connectiton between the viewer and the design by bringing the audience out of a state of 'passivity' which is otherwise facilitated by traditional design visualisations:

"We think it is better to engage people through a skillful use of ambiguity, to surprise, and to take a more poetic and subtle approach to interrelationships between the real and the unreal."

(Dunne & Raby, 2013, p. 102)

The authors are searching for a balance between the real and the unreal, and are cautious to cases that go too far in either direction – if a designer attempts to ground their representations too much in reality they lose their speculative potential and fall into pastiche, and similarly if they veer from reality altogether they risk losing their relatability. Further, they argue that speculative work does not necessarily need to be situated in a future imagined world. Instead, speculation can occur in the past, in the present day, be timeless or fluid. The latter is often the case with the work of John Hejduk, who uses a constructed non-passage of time as a narrative tool.

"There is an assumption with speculative work that it is oriented toward the future, but it can simply be somewhere else, a parallel world to our own rather than a possible future."

(Dunne & Raby 2013, p. 129)

Hejduk uses allegory and symbolism to imagine a built environment constructed on fictional scenarios, where characters have simple and conflicting intentions, and inhabit the architecture in a predicted but unusual way. Hejduk's architecture draws tendencies from reality and creates likenesses by claiming earthly territories and commenting on that which we know: good and bad, peace and war, loneliness and community, but creating new worlds by spatially reinterpreting characteristics of humanity in all its raw ugliness. His worlds are neither set in present time, the past or the future, instead they suggest a fluidity of time, where events are echoed in eternity rather than assuming that developments happen and things change. When Hejduk narrates his spaces he employs precision - he gives actions to the city, to the people and to individuals, in the order of occurrence, and each action is consequential, bound to rules. We are by now familiar with the conditions of the men in The Thirteen Watchtowers of Cannareggio:

"The City Of Venice Selects Thirteen Men, One For Each Tower For Life-Long Residency. One Man Lives In One Tower, And Only He Is Permitted To Inhabit And Enter This House. A Fourteenth Man Is Selected To Inhabit The Small House Located In The Campo."

(Hejduk, 1985, p. 345)

The story that Hejduk tells is poetically ambiguous, it comes from a fictional universe that is never described, only narrated. What Hejduk is presenting is a kind of fictional debris, a literary device described by Peter Schwenger (2006) as evoking a dreamlike state, where the reader has to make personal connections to fill in the gaps. In this way, the narrative is made sense of through the insertion of one's own memories into the debris given by the author. The reader becomes part of carrying the narrative forward.

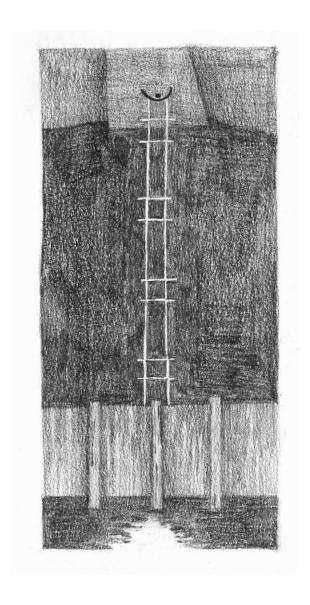
Hejduk gives his architecture human features — the towers stand as the eyes of the city, ensuring cooperation through ritualised actions taking place around their base. There are seemingly arbitrary rules which reinforce the sentiment of isolation and silencing that Hejduk is commenting on. For instance, the men are not allowed to reveal the interior colour of their walls to anyone. The men in the watchtowers observe the city without

partaking in the citizenship. In turn, the citizens become observers themselves by watching the fifteenth man, The Inhabitant Who Refused To Participate, in another structure in another part of the city, amplifying the impossibility of divergence in this fiction.

There is no individuality or will in Hejduk's narratives, apart from the ritual selection of a chosen one from the masses for inhabitation – the citizens have no say in the matter and if they disobey they become the unfortunate object of reinforcement. The architectural narrative is used to criticise both the conception of time – the ostensible development of the world, and the illusion of choice. Hejduk holds a mirror up to society, asking us if his imagined worlds are not in fact more real than we want to accept?

As exemplified through the work of John Hejduk, speculation is a designerly device used to critique the status quo and suggest alternative modes of progression without claiming to have the solutions and, in fact, often leaving the reader with more questions than before. Speculation remains fragmented and open-ended, requiring reading between the lines and independent reflection. Contrary to commonplace design methods, speculative design seeks not to find solutions, but to create a foundation for questioning how things function, and in what way we can be part of creating change.





THE CRYING LIGHTHOUSE AND OTHER STORIES

In the story that follows, we meet the Two Baths and a Lighthouse, marked by stain and erosion. The water is led in from the roof of the lighthouse through the wall, along the inside, and then gathered in a tank. When it overflows, some of the water continues through a steel pipe which terminates on the outside of the wall. It drips down, slowly forming a stain on the south facade of the lighthouse. Back inside the lighthouse, some of the water instead drops down about 18m into a trough, the drip echoing in the otherwise silent void. The water is led again through the wall, onto an aqueduct which leads it out over the cliff side. Reaching the end of the halfpipe, it also finds a steep drop, dripping down onto the concrete wall separating the bathing pier from the ocean. With time, the structure is eroded, exposing the reinforcement beneath and returning it to the sea.

But pretend you don't know that, and the story will begin.



REACHING A LIGHTHOUSE

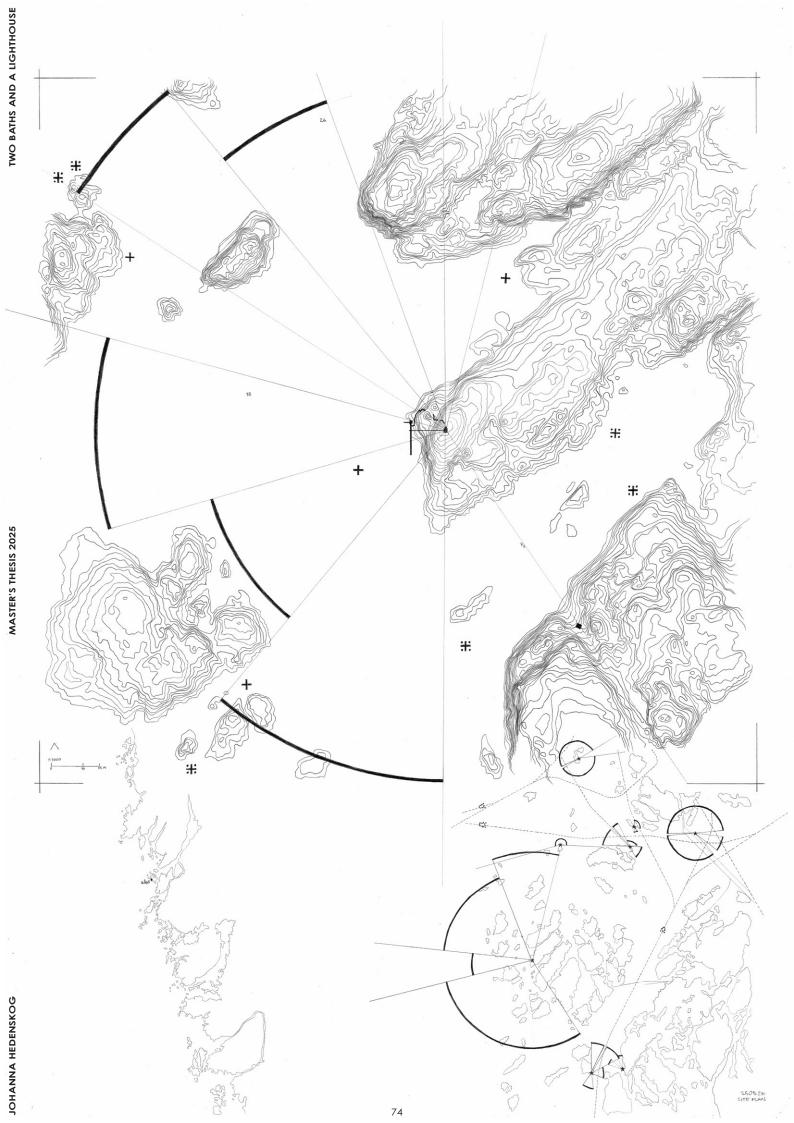
The island is a desert of rocks, sweeping in ridges diagonally across the map. The comings and goings of ice ages have left scores pointing reliably north-east, like a poorly calibrated compass. We find The Hiker Who Is Guided By Naive Intuition, once diverted off the path marked by stones painted blue, and now scraping over the folds in the landscape, further and further, little by little. Past a yellow house tucked away neatly, an image appears slowly across the cove. Distracted, and fueled again by intuition The Hiker rushes, though in a rather restrained capacity, toward the silhouette, a tower, and stumbles across the ridges and shrubs. Then, the rock gives in for a forest of thorns and the hiker's march is halted. In every direction, the thorns have closed the way and enclosed the hiker within.

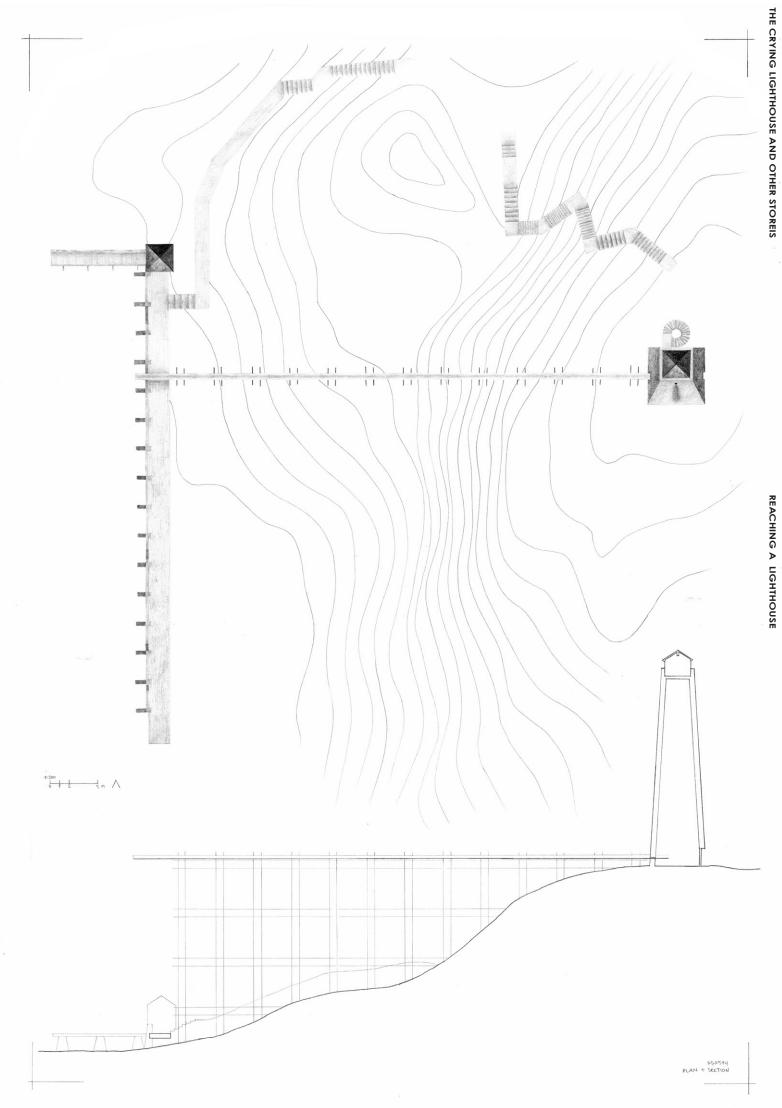
This is where we leave The Hiker Who Is Guided By Naive Intuition, and fly directly upward. It is in this valley where the bedrock which was gneiss turns to granite, and the ground gets lighter, almost reddish and it shimmers. To the south we see wounds scattered along the coast – quarries where, once upon a time, the precious stone was mined. To the north we just about glimpse the seal colonies where, on brighter days, off duty fishermen bring tourists to try their luck. And, to the west, the vast sea opens up in a raging silence. But, what again was the tower that The Hiker saw? Perhaps we will return to it.

Following spread:

Drawing 19. Site plan of Gåsö showing the location of the Two Baths and a Lighthouse at 1:3000 on A2. Pencil drawing on cartridge.

Drawing 20. Plan and section of the Two Baths and a Lighthouse at 1:200 on A2. Pencil drawing on cartridge.







WATER AND IRON

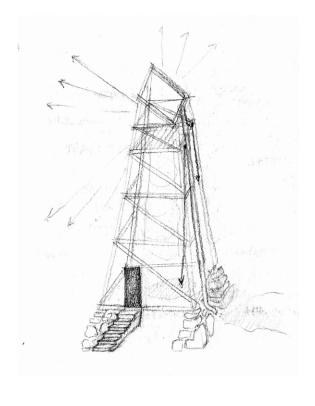
A drop of water gathers itself inside a pipe, suddenly. As it continues tumbling downward, rolling at concerning speed for such a small thing, it considers the options. Perhaps it fell from the sky, dropped from a cloud or a bird of some kind, or it splashed from the ocean by an unusually large crash into the rocks. Such a dramatic entrance seems much more spectacular and indeed honourable than being formed by condensation inside the dark cylinder, like an average puddle.

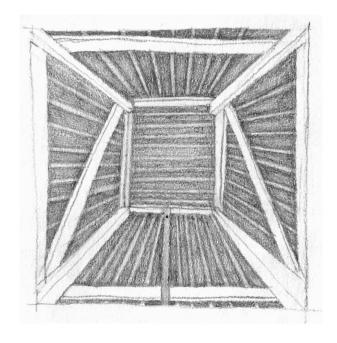
Such things are pondered by The Drop as it moves along, slower now. Its weight leaves a residue, polishing the concave metallic surface in its trace. Somewhere inside the pipe, and with a slight shudder, it comes to a halt. Understandably taken by the events it settles down, huddling up on the spot for some rest. What the drop doesn't know is that already, at the edges of its dewy path, somethings are beginning to wake up.

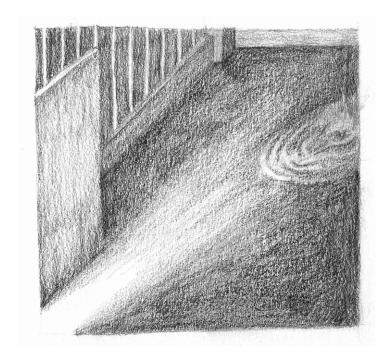
Bothered by the abrupt passage of The Drop, The Iron mutters and grunts. "Leave me alone!" it thinks, frustrated by the lack of someone to aim its anger towards. The Iron has been soaked by the water rudely left behind by The Drop, which has already disappeared into the darkness. Irritated and uncomfortable, it tries to shake off the water. It stings! Little red spots are already breaking out on the metallic surface. As more of the water dries up, more spots appear in various shades of orange, red and green. The iron swears to itself, wishing death and destruction on the detestable water drop. Then comes the flood.

Just as The Drop falls into a slumber, not noticing the ground beneath changing colour, the other sudden event occurs. The Drop finds itself in a turmoil, swirling around with little red particles that cut through the water in a most unbecoming way. Together they tumble toward the light – the end of the pipe? – wrestling without aim or objective. The flood bursts out in the open and streams down a bumpy wall. The Drop is momentarily overcome by the lack of control over its own destiny, but in the next moment it watches, pleased, how the red flakes seem to stick to the uneven white surface, leaving marks in the wake of the flood. The Drop, however helpless and small, keeps moving.

MASTER'S THESIS 2025







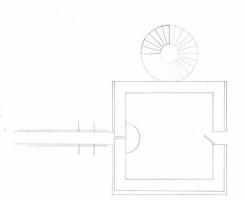
Left:

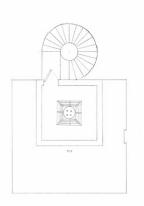
Concept sketches of the Lighthouse and its workings.

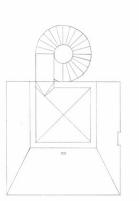
Right:

Drawing 21. Isometric section through the top of the Lighthouse, originally drawn on A2. Pencil drawing on cartridge.











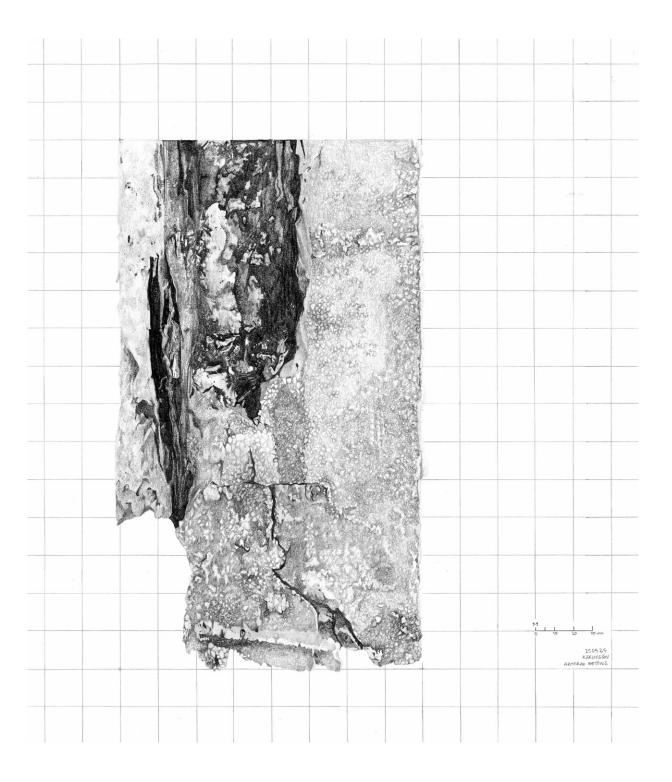
WAVE

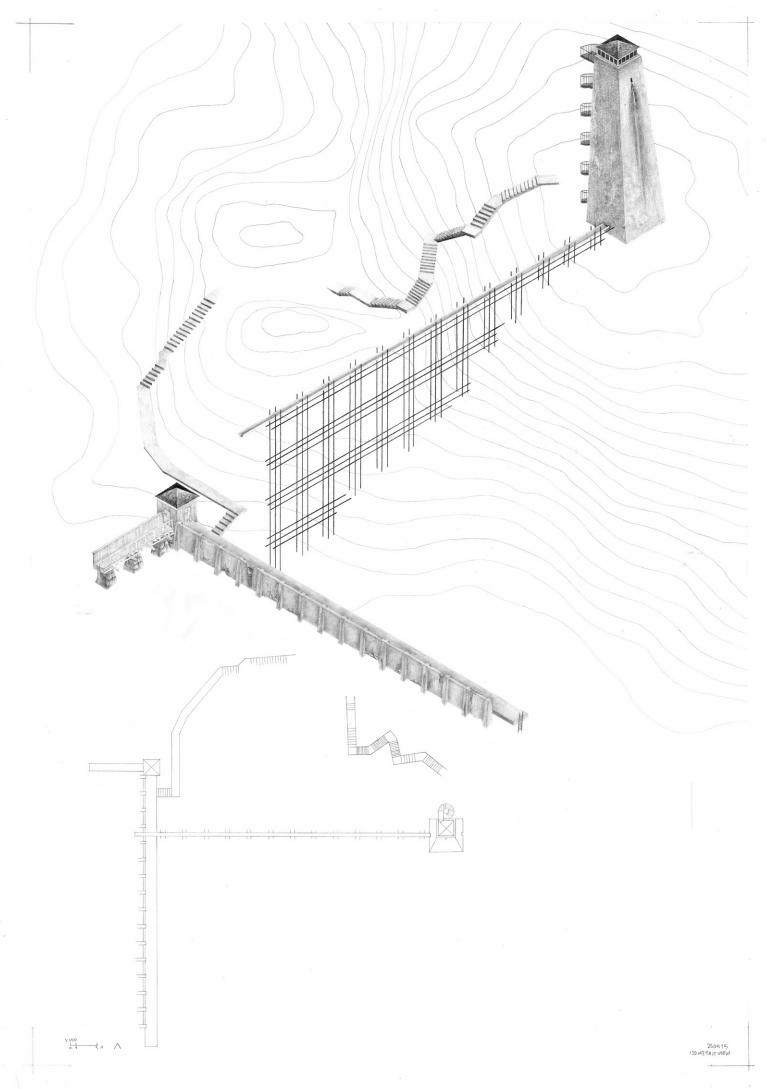
Wave! There is Someone standing on the pier.
Wave! Crushed between the water and the earth.
Wave! The pier is a crumbling ground, a flawed foundation with skeleton pipes sticking out. They extend at nasty angles, gnarled and twisted and chewed by the Wave! Someone is waving from the pier.
Wave back! Is it an invite or a call for help?
Wave! and you will find out.

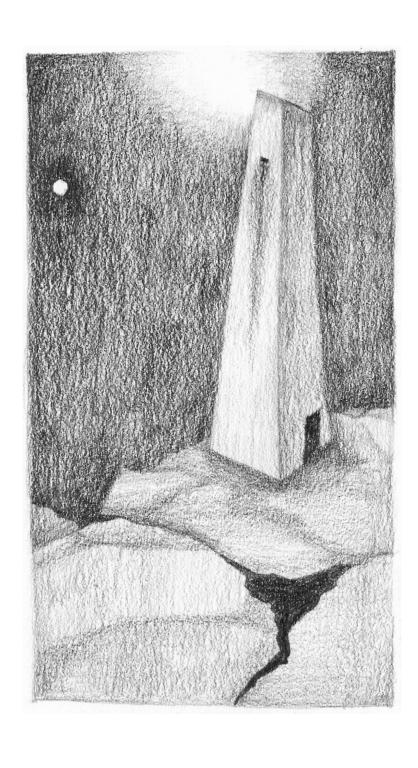
Following spread:

Drawing 22. Detail of eroded concrete ocean wall of the Two Baths. Scaled down to 1:2. Pencil drawing on cartridge.

Drawing 23. Isometric view of the Two Baths and a Lighthouse, originally drawn on A2. Pencil drawing on cartridge.







THE CRYING LIGHTHOUSE

On one of the rocky tips of Gåsö stands The Lighthouse. During the day it stands, looking out on the skerries breaking the waves coming at the island. The Lighthouse is unaccompanied but for the occasional encounter with a visitor from the sea or on foot from the small village on the eastern end of the island. The isolated and rough landscape makes the journey difficult and in certain conditions dangerous. The Lighthouse turns its head to the sea, looking for someone to guide. On windy days the sailboats emerge like white doves on the horizon.

The Lighthouse emits light in three directions: north, west and south. On the eastern side, which almost no one sees, there is only a door, wooden and rusty. When it creaks open and just as quickly shuts, the silence is immense. Only a reluctant drop! is heard, and as the darkness settles a faint glow is felt from far far above. A pipe hangs treacherously below the opening, and disappears into the wall.

It is a curiously misplaced overflow pipe and it terminates just outside. Over the years condensation, rain and salt spray have slowly corroded the iron and left a permanent stream on the white rendered stone facade, growing larger with time. Hikers must think, oh what a sad and lonely lighthouse, it stands here all alone in the dark, lamenting its sorrow.

But at dusk, The Lighthouse stands steadfast, leading sailors back to the harbour. At night, those who didn't return on time place their faith in The Lighthouse to show them the way under the light of the moon. Then, as the sea empties and the waves roar in the silence, the moon keeps The Lighthouse company until dawn.





Drawing 24. Detail of rusty door hinge. Scaled down to 1:2. Pencil drawing on cartridge.

DISCUSSION

By developing methods of detailed documentation and architectural representation through hand drawing and modeling, as well as spatial narration supported by theoretical proposition, this thesis has explored the potential of critically re-evaluating the process of decay in architectural structures.

Above all, this thesis has been an artistic exploration of drawing methods and this is reflected in the design outcome. The theoretical discussions which have arisen around this have served both to create an understanding of the phenomena captured through the drawings – the effect of weathering on materials – but also to construct a scaffold from which to examine our perceptions of weathering. An attempt has been made to define this scaffold, or framework, through the term frangetur, meaning roughly 'that which will be broken'. This is a term that deserves to be studied and defined further and with anchoring in both historical and contemporary discourse.

Rigorous work has been done by others on the public perception of decay, a small portion of which has been used to inform the position of this thesis. Grossi & Brimblecombe (2007), for instance have used quantifiable methods to determine the general perception on decay, by conducting site surveys where the public is queried on their opinion of signs of aging on urban buildings. This form of research gives reasonable conclusions and answers the question on perception. The purpose of my explorations, while grounded in an understanding of public perception, have been to extend this question without tangibly defining an answer. The speculative nature of this research and design process rather demands creating space for imagining how reality can be shifted. No quantifiable conclusions can be drawn from this research, nor any satisfying answers or solutions: only dreams.

"This is where we believe speculative design can flourish – providing complicated pleasure, enriching our mental lives, and broadening our minds in ways that complement other media and disciplines."

(Dunne & Raby, 2013, p. 124)

Interms of real-life application, I find valuable suggestions in the speculations on how architectural weathering can inform design, which will continue to be an intriguing question for me. How the materiality of the elements, such as water and air, can be embraced architecturally has already been exemplified by Peter Zumthor's Therme Vals, but also in more humble works such as Knut Hjeltnes's Grønland *hytte*. These architects prove that there is scope for bringing the theoretical argumentation of this thesis, particularly the views presented by Mostafavi & Leatherbarrow in *On Weathering* (1993), into physical existence. I hope to continue on this line of reasoning in my future work, both through expanding my documentation catalogue, but also by bringing some of these ideas into built work.

There are many broader questions raised by this research which remain to be answered, relating to how things work and how to navigate the present day in the capacity of architect. Conservation as a field of interdisciplinary practice is intolerant to reform. Its principles were defined by the Venice Charter in 1964, and remain largely static. Applied by skilled professionals, architectural conservation ensures the preservation of our built heritage for the future. This thesis has not made an attempt at querying or rewriting these principles, which are internationally recognised, but instead to raise the question of what constitutes cultural heritage. What stories do we want our built environment to tell? Is there space at the top of the metaphorical pyramid of hierarchy, beside the stories of the empires and powerful leaders and institutions who built our cities, for stories about the people and the elements who continued to shape them?

We face an increasingly outdated stock of mid-century housing, office and public buildings in prime locations which carry many of the unsightly characteristics discussed in this thesis. At the time of writing, the debate around the future of Valhallabadet in central Gothenburg, completed in 1956, is intensifying. This was the first building that made me search for stories in the details, and I was captivated by it. In every definition except for the law, this building is part of the city's cultural heritage and should thereby be protected. To avoid the tragic and excessive loss of this and similar buildings, we – architects, artists, students – need to work towards a renewed understanding of cultural heritage, and in this





also explore new tools of representation which can be used to propose alternatives to the general public, as well as to policy makers.

"Are the effort and skill we put into them inherent parts of the things we make?"

Peter Zumthor asks himself (2006, p. 11). Architecture serves the capitalist market, and commercial interests exceed aesthetic ones with ease. Craftsmanship is slow, excruciatingly so, and requires great proficiency that can only be handed down through generations. Much of this knowledge has been lost with the increasing dependency

on machines to produce design and construction. Machines make architecture commercially viable. John Hejduk creates space for machines and humans in his architecture, but also for angels (Hays, 2002), suggesting an entangled codependency between 'species' through his imaginary building of worlds. He leaves us with questions about who who we are, as mortals who find ourselves confined in between the mechanical and the supernatural. A question about whether this is the time for leaving machines behind:

"This is the time for drawing angels."

(John Hejduk in Hays, 2002, n.p.)

BIBLIOGRAPHY

- Ashurst, John & Francis G. Dimes (Eds.) (1990). Conservation of Building and Decorative Stone. Butterworth-Heinemann.
- Binet, Hélène (2021.1). *The Intimacy of Making: Three historical sites in Korea*. Lars Müller Publishers.
- Binet, Hélène (2021.2). *The Walls of Suzhou Gardens: A photographic journey*. Lars Müller Publishers.
- Brimblecombe, Peter (2000). Air Pollution and Architecture: Past, present and future. *Journal of Architectural Consevation*, *2*, 30-46.
- Correia, Marina (2024). Watchful Solitude: John Hejduk and Venice. Drawing Matter. https://drawingmatter. org/watchful-solitude-john-hejduk-and-venice/. Accessed 30 September, 2024.
- DeBlieu, Jan (2015). Wind: How the Flow of Air Has Shaped Life, Myth, and the Land. Open Road Integrated Media.
- Dunne, Anthony and Fiona Raby (2013). *Speculative Everything: Design, Fiction, and Social Dreaming*. MIT Press.
- Engels-Schwarzpaul, Anna-Christina & Carl Mika (2020). Silences Generating Space. In Dorrian, Mark and Christos Kakalis (eds.), *The Place of Silence: Architecture/Media/Philosophy* (pp. 139-148). Bloomsbury Visual Arts.
- Flygare-Carlén, Emilie (1842). *Rosen på Tistelön: Berättelse från skärgården.* Litteraturbanken.
- Foote, Jonathan (2016). Ritning som byggande: Lewerentz och ritningarna till S:t Petri. In Hall, M. & Göritz, H. (Eds.), *Lewerentz S:t Petri 50 år* (pp. 74-83). Klippans pastorat.
- Gissen, David (2009). Debris. AA Files, 58, pp. 8-11.
- Grossi, C. M. & Brimblecombe, P. (2007). Effect of long-term changes in air pollution and climate on the decay and blackening of European stone buildings.
 In Building Stone Decay: From diagnosis to conservation. Geological Society of London.
- Grundborn, Lennart (2012). *Havet vi ärvde: Grundsund i tidens hav.* Båtdokgruppen.

- Hays, K. Michael (2002). Sanctuaries: The Last Works of John Hejduk. Whitney Museum of American Art.
- Hejduk, John (1985). The Mask of Medusa. Rizzoli.
- Jansson, Tove (1965). Pappan och havet. Förlaget.
- Koudelka, Josef (2020). Ruins. Thames & Hudson.
- Le Corbusier (1987). *The Decorative Art of Today*. The Architectural Press.
- Lind, Helena (2004). Kallbadhus. Byggförlaget.
- Lobell, John (2008). *Between Silence and Light: Spirit in the architecture of Louis I. Kahn* (2nd ed.). Shambhala.
- Mankell, Bia (2013). Bild och materialitet: Om föreställningar, synsätt, material och uttryck i måleri, teckning och fotografi. Studentlitteratur.
- Mostafavi, Mohsen and David Leatherbarrow (1993). *On Weathering*. Massachusetts Institute of Technology.
- Patteeuw, Véronique (2020). Drawing is Building. *OASE*, *105*, 72-75.
- Ray, Debika (2019). Behind the Lecture: Beate Hølmebakk's paper architecture. *Harvard Department of Architecture*. https://www.gsd. harvard.edu/2019/02/behind-the-lecture-beate-holmebakks-paper-architecture/. Accessed 26 September 2024.
- Schulze, Franz (1981). *John Hejduk: Masques*. The Renaissance Society at the University of Chicago.
- Schwenger, Peter (2006). *The Tears of Things: Melancholy and Physical Objects.* The University of Minnesota Press.
- Tranströmer, Thomas (2004). *Den stora gåtan*. Albert Bonniers Förlag.
 - Zumthor, Peter (2006). *Thinking Architecture* (2nd ed.). Birkhäuser.
- Zumthor, Peter (2007). *Therme Vals*. Verlag Scheidegger Sr Spiess.

DRAWINGS

Drawing 1. East facade, Valhallabadet at 1:1. 2024.

Drawing 2. The drawing process. 2024.

Drawing 3. Timber panel, Johanneberg at 1:1. 2024.

Drawing 4. The rusting of a shed door, Penicuick at 1:1. 2024.

Drawing 5. The delamination of sandstone, Edinburgh College of Art at 1:1. 2024.

Drawing 6. Corner and downpipe, Fattigbadhuset, Gustafsberg at 1:1. 2025.

Drawing 7. Pillar base repair, Varmbadhuset, Gustafsberg at 1:1. 2025.

Drawing 8. Pillar no. 2, Varmbadhuset, Gustafsberg at 1:10. 2025.

Drawing 9. Pillar no. 8, Varmbadhuset, Gustafsberg at 1:10. 2025.

Drawing 10. Pillar no. 12, Varmbadhuset, Gustafsberg at 1:10. 2025.

Drawing 11. Peeling paint on handrail, Kallbadhuset, Lysekil at 1:1. 2025.

Drawing 12. Rust stain on fence post, Kallbadhuset, Lysekil at 1:1. 2025.

Drawing 13. Fence post no. 2, Kallbadhuset, Lysekil at 1:10. 2025.

Drawing 14. Fence post no. 4, Kallbadhuset, Lysekil at 1:10. 2025.

Drawing 15. Fence post no. 6, Kallbadhuset, Lysekil at 1:10. 2025.

Drawing 16. Door hinge, Stångehuvud, Lysekil at 1:1. 2025.

Drawing 17. Timber panel, Stångehuvud, Lysekil at 1:1. 2025.

Drawing 18. Door and window, Stångehuvud, Lysekil at 1:10. 2025.

Drawing 19. Site plan, Gåsö at 1:3000 on A2. 2025.

Drawing 20. Plan and section at 1:200 on A2. 2025.

Drawing 21. Isometric section through lighthouse, original on A2. 2025.

Drawing 22. Detail of eroded concrete wall at 1:1, scaled down to 1:2. 2025.

Drawing 23. Isometric view, original on A2. 2025.

FIGURES

Figures 1-2. Binet, Hélène (1997). *Therme Vals* [Photograph]. Reprinted with permission.

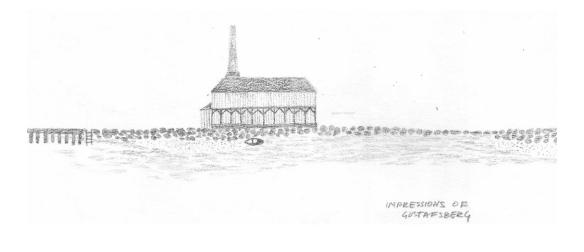
Figure 3. Friberg, Roj (1978). *Göteborgs konstmuseums fasad*. [Drawing]. Reprinted under fair use.



"När han vände sig om för att se på sin ö såg han ett vitt ljus som föll ut över havet, det trevade sig fram till den tunna horisonten och kom tillbaka igen i långa regelbundna vågor. Fyren var tänd."5

(Jansson, 1965, pp. 209-210)

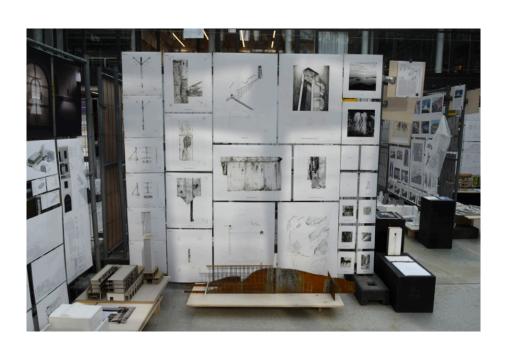
^{5.} Translated as:
"When he turned around to look at his island he saw a white light falling out on the sea, it fumbled its way toward the slim horizon and returned again in long regular waves. The beacon was ignited."



Johanna Hedenskog

Two Baths and a Lighthouse: A study on exposure and weathering

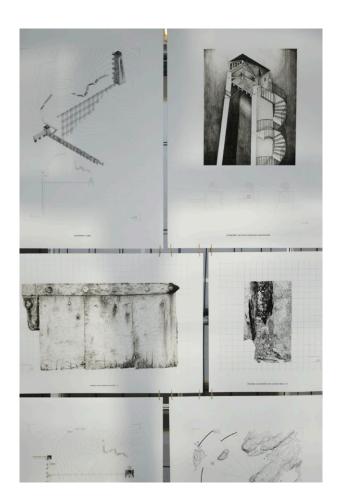


























Photos of concept models at 1:200 and 1:1, made from steel sheet, pipe, wire, sanded acrylic and timber.



STUDY TRI

STUDY TRIP

I went on a five day study trip to Bohuslän to visit the site at Gåsö, get photos from inside *Kallbadhuset* in Lysekil, and immerse myself in the environment that is particular to that area. I want to visit the two baths on Käringön and RISE's research test bed on Bohus-Malmön. All of these visits were part of gathering inspiration and material, in terms of photographs and sketches, for the design phase. I also saw this trip as an opportunity to gather material for future work building on the thesis.

The study trip was funded and enabled by a grant from Edith och Egon Plomgrens fond.

I received help from two local fishers to drive me to and around Gåsö, but the rest of the trip I did by myself. This was important in order to have space for thoughts, ideas and creativity. My visit to Gåsö was particularly insightful, it was a whole day of exploration and reflection over the potential to make speculative intervention and compose a narrative for the life of the lighthouse. But it was also a realisation of the difficulty involved in navigating such a dramatic landscape.

I built a 1:150 sketch model of the lighthouse as it is in its current form, which I brought to the island. I have matched the proportions with my sketches and it is about 20m tall in full scale, on a 6x6m square plan which tapers towards the top. One of the walls is right-angled and the other walls are leaning against it. Is it leaning against the sea or away?

I also brought a Hasselblad 500C from 1959 on the trip, borrowed. With this, I was hoping to capture some of the spirit of the places. It's a bulky, solid machine which fires 'like a weapon', as my friend expressed it. I felt humbled by a duty to do it justice.

JOHANNA HEDENSKOG

8 April 2025, 15:50, Fiskebäckskil

I arrived at the harbour 09:00 to meet Kent and Lennart, local fishers. With their small fishing boat Saga we drove around the island from the west to reach the seal colonies to the north, and then the harbour on the east end. During the hour long ride the sky went from a uniform hazy white to an intense blue. The water was completely calm. Along the south-west side of the island there were large white markings on the rocks. Lennart explained that those were made by the military for navigation purposes and that the archipelago is regularly used for military training. Recently this has become more frequent.

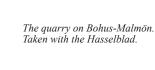
Lennart also told me about the shift from gneiss to granite which happens on the island. The mainland rock is gneiss and as you move out into the sea the granite starts taking over. It is characterised by its reddish hue. We passed a few quarries splayed out along the shore like open wounds to the sea. It is no longer allowed to source granite from the island, but the quarries serve as reminders of the past. We didn't see any seals on the rocks of the seal colonies, but one of them was observing us quietly from the water. "Se så nyfikna de är" said Lennart as we passed and it kept following us for a bit.

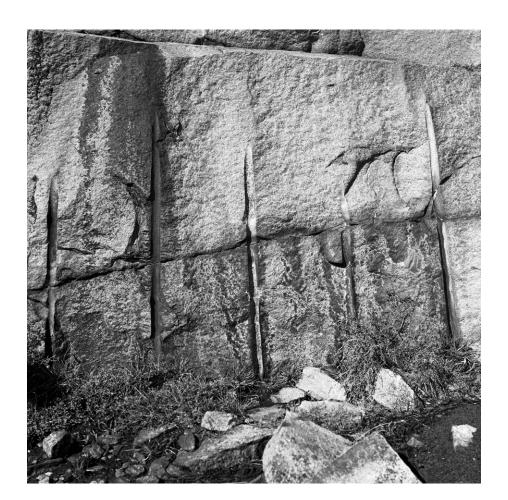
We finally reached the Gåsö harbour at 10:30 and decided that they would pick me back up at 14:30. I had a quick look around the harbour settlement and took my first photo with the Hasselblad. The island seemed at first sight to be empty but soon builders working on some of the large villas facing the water begun appearing.



The first photo in the Gåsö harbour, taken with the Hasselblad.









9 April 2025, 16:43, Fiskebäckskil

On Bohus-Malmön I parked the car and left both jacket and Hasselblad behind, not expecting to take any particularly amazing pictures through the fences of the RISE test site. But after a 15min hike I stumbled upon the quarry. I had seen it marked on the map but not thought much of it. I realised that I needed to turn around and get the proper photography gear. It was a beautifully sunny, windless day and I spent a few hours in the quarry capturing all its layers and variety. I took three pictures with the Hasselblad of cracks and stains, different signs of human activity in this now abandoned jacked-up scar on the coastal landscape. It was truly rewarding.

Only later did I reach my original destination which was a short walk away. I hadn't expected to get very close to the samples, which turned out to be no more than Im away from the fence at points and completely exposed. There I captured some photos through the fence, but let the Hasselblad rest for a moment. Happily, I returned to the car and drove back via Lysekil, stopping for some yarn and to investigate the availability of 120mm film in the archipelago. None.



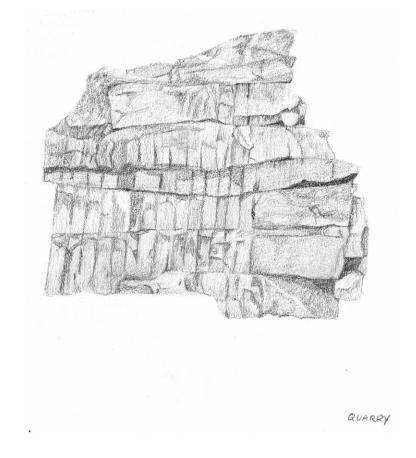
10 April 2025, 18:02, Fiskebäckskil

On Thursdays Lysekils Kallbadhus has cleaning time between 09-12. I had already emailed ahead to check whether I could go inside and take pictures during this time. There was scaffolding put up along the northern facade, and I considered it lucky that I had already taken my primary photos of that part during previous visits. I almost immediately headed into the men's section, where I had never been before, and had to climb through the scaffolding which was placed in the narrow entrance corridor. Well inside the interiors unfolded and revealed a much more expansive space than that of the women's bath. The water was green-blue and shallow, a relatively low water level, and I could stand in half of the pool with my feet emerged but without getting my rolled up jeans wet.

I placed the Hasselblad, on the tripod, in the shallow end of the pool and photographed one of the large stone piles dividing the men's bath from the women's. The space in between would have been open if it was not for timber panels hung beneath the getty on the women's side to shield from view. Most of the time, the bathers are naked. The water was cold and biting but not unbearable, 8.5 degrees, and the pool was clean if somewhat infused by creatures of the sea such as seaweed and traces of lugworms.

Half of the men's getty is placed on a rock which you can walk over to reach the sauna bath – usually accessed from the new sauna which is built into the southern corner tower. As such, the bath is effectively divided in three sections. The sun shines in on the men's side of the pool and it opens up to the sea in a much more effectful way than the women's pool, making it feel more spacious and bright. Architecturally, as well as socially, the comparison is significant.





EXAMINER: NAIMA CALLENBERG

ARCHITECTURAL EXPERIMENTATION

TWO BATHS AND A LIGHTHOUSE

MASTER'S THESIS

A STUDY ON EXPOSURE AND WEATHERING