

# Turning the switch on again

revitalizing decommissioned lighthouse stations

## CONTEXT

As architects we want to learn how we can adapt and reuse existing building structures and at the same time find the balance between challenging the conservation laws and be respectful of the cultural heritage

Lighthouse stations that were once lived-in have gradually been abandoned with the arrival of modern technologies. As it became a simple lantern, a place no longer inhabited by humans, many of the lighthouse stations have progressively deteriorated as it often happens to coastal buildings when their function expires. As structures with cultural and historical value how do we protect these buildings against deterioration?

The process of revitalization that many of the lighthouse stations have gone through has mostly been implemented by volunteers motivated by their personal interest. They have set a good example of how to keep these buildings in good condition, and opening them up for the public. Some lighthouses have been labelled with a cultural heritage status, while some not have not. There are many considerations to take when adapting this building type to new use; money, conservation laws, history, location, context and current light facility use.

## WHAT

Through this diploma project we look into the potential that lies within this building type. and aim to answer the questions :

“What is a lighthouse in the 21 Century?”

and

“How does one adapt and reuse a building that has become decommissioned while showing consideration towards the economical, cultural and historical value?”

## HOW

We started our research by mapping the existing lighthouse stations along the coast of Norway. Considering types, history, economy, cultural heritage, use, protection laws, and the landscape they are placed in, we then choose three lighthouse stations to explore the potential of new use.

To understand the impact we as architects can have in determining a new use, we worked in three scales: macro, meso and micro.

In the macro scale we looked at the 226 lighthouse stations along the coast of Norway and mapped them into different criteria. Which ones are protected, and which are not? Which ones are in use and which ones are in danger of deteriorating? What are the different typologies and use today? Are the network of lighthouse stations somehow connected?

At the meso level we seek to understand the three lighthouses at a municipality level. How are they connected to the communities around them? Will we find new connections that can give them new use?

A the micro-scale, we zoomed-in at the three lighthouse stations we choose based on the mapping from the macro- and meso-scale. Understanding the landscape they are in, the history of the lighthouse stations and the communities, and the state they are in today. We did registrations of the lighthouse station's constructions and materials.

Based on the knowledge that we have gained through the mapping of the three scales we did design interventions that hopefully will give new life to the forgotten and neglected lighthouse stations.

## WHERE

Along the coast of Norway, there have been 226 lighthouses, of these, up to 154 have been in operation simultaneously. Today, a total of 107 facilities are defined as lighthouses in Norway. To understand the similarities and the differences, their context and building type, we have mapped all the existing lighthouses.

We have zoomed in on three situations to further understand what they have meant, and can mean to the local community, landscape and to the network of lighthouse stations along the coast today. Three lighthouse stations each telling a story of their own with a new use that we hope will prevent these buildings to end up in ruins.

The lighthouse stations that we will propose interventions at are:

1. Makkaur lightstation: located in Båtsfjord municipality in Troms and Finnmark county
2. Træna lightstation: located in Træna municipality in Nordland county
3. Hendanes lightstation: located Kinn municipality in Vestland county

We used these different locations as opportunities to consider/explore the questions that drive the project .

## Turning the switch on again



revitalizing decommissioned lighthouse stations

"This is part of our heritage. The fact that Norway today is a welfare nation is largely due to the coastal bear and the resources we have been able to reap. We spent an awful lot of time and money building an impressive network of lighthouses along the coast at a time when we were one of the poorest nations in the world in the 18th - and 19th century. Now we are one of the richest countries in the world and we can not take care of them. It is something to think about"

Per Roger Lauritzen,

# CONTENT

<b>01</b>		<b>02</b>		<b>03</b>	
intro		topic		mapping	
introduction	5	context	11	how	16
background	6	what	12	scales	16-17
essay	7-8	where	13	types	18
				landscape	19
				life at the lighthouse	20
				strategy	21
<b>04</b>		<b>05</b>		<b>06</b>	
calendar		cv		ref	
framework	22-23	info	26-29	references	30
		education	26-29	images	30
		work	26-29		
		mastercourse	26-29		

# 01

## intro



"The weather was bright and fine. The landing conditions were difficult, and at that time we did not wear life jackets. The sea went up and down. I held on to the rope until a guy said jump. I jumped, and a powerful fist greeted me"

Son of lighthouse keeper at Holmengrå



## Introduction

Lighthouses have always marked human history, acquiring crucial importance beyond the basic function of a warning facility: suggesting dream, adventure, fascination, and mystery.

From south to the north of the Norwegian coastline, soaring and in solitary, lighthouses are often situated in wonderful and often uncontaminated ecosystems and they are an inestimable legacy of the past.

## Background

As Norway became a maritime nation with a focus on the import and export of goods by boat, the lighthouses grew along the coast of Norway between 1830 and 1930. The lighthouses played an important role in showing the way in the dark, but they did more than show the way for sea vessels, they also represented new growth for a poor nation. They showed the way to new prosperity.

However, the technological development gradually reduced the need for manned lighthouses - the operation of the lighthouses was automated and could be controlled remotely. In 2001, the Government decided that the last 31 manned lighthouses should be decommissioned, and in 2006 the last lighthouse keeper left the workplace leaving many of the lighthouses to decay.

*"the technology means that people do not have to live on a lighthouse to take care of ship traffic. Modern boats have been given the equipment they need to sail safely, and the lighting of lighthouses also takes place automatically from the Norwegian Coastal Administration's office.*

*Now most of the lighthouse stations are turned off, unfortunately, only a few lighthouse stations along the coast are still lit. I think it's sad that people no longer live on Fire. It was a wonderful place to grow up."*

Sonja, Svenner Lighthouse

## Essay- Elisabeth

Landmarks can be seen as an identity, something that informs or shapes the space around us and our collectiveness. Within a landmark one can find symbolic of time and history, adventure and prosperity. They separate and unify, change with time and/or stand as a monument of a space in time.

They vary in scale, their placement in landscape and how they inform of a community.

In this essay, I explore how societies are connected to landmarks, and how the significance of landmarks can become a process of liquidation and oblivion or revitalization.

Why are some landmarks highly valued and kept in use, while some are decommissioned and left behind to deteriorate? And what effect does the shift of its function have on a community?

In understanding the value of landmarks, I also look at how we understand the notion of landscape.

Philosopher Maurice Halbwachs, describes landscape as “a collective memory”, and that “the collective memories marks the composition of landmarks that provides spatial and temporal coordinates for remembering.”

By exploring the concept of landmark and landscapes, it informed me on how we could deal with Lighthouses, as they could by definition be seen as Landmarks.



## Essay- Thea

What if everything you ever wanted isn't what you actually want?

Mental Minimalism is a lifestyle that helps people question what things add value to their lives. The idea is that by clearing the clutter from our lives, we can all make room for the most important aspects of life: health, relationships, passion, growth, and contribution. The question is: how might your life be better if you owned fewer material possessions? A minimalist lifestyle can look different for everyone. Essentially it's about gaining a focus, a calm mind, and simplicity in life by getting rid of excess stuff, all the noise, all the mess, and only keeping what is meaningful and makes us thrive. The idea is that this can be small scale or big scale, and the principles can apply to every single aspect of life, both mental and material. By adopting the idea of mental minimalism one would consume less thus leaving a lighter ecological footprint. The shift from spending time on things rather than more lasting values would improve quality of life. A life of freedom without being controlled, forced, or hindered by all the clutter in your life, and thus living a life that is more in compliance with what the world needs.

"Our possessions often serve as a coat of paint over whatever structure we've already built for ourselves. It's possible to invest in things that reinforce our load-bearing beams and doorways, of course, to buy stuff that helps us bolster our foundations and add a tasteful breakfast nook to the blueprint. But a coat of paint won't hold up a ramshackle structure, and decorations won't fix a cracked foundation. Things can be valuable, can add to our enjoyment of life, and a sense of productive fulfillment and happiness. But they won't create happiness or fulfillment or joy out of nothing. Things can only amplify what's already there."

Colin Wright, Minimalist



"There was yet in the old some life, some mysterious suggestion of what has been, and of what it had lost; some sweetness in the gentle lines which rain and sun had wrought.. "

John Ruskin, 1849



## Norske fyr: – Forferdelig at Norge ikke tar bedre vare på kulturarv

Per Roger Lauritzen har snart besøkt 170 av Norges 226 fyrstasjoner. Han mener det er synd at «verdens rikeste land» ikke klarer å ta vare på en viktig del av kulturarven - fyrene langs kysten.

### – En del av arven vår

Tiden for fyrlyktene som en del av en operativ, maritim infrastruktur er på mange måter forbi, i dag navigeres det ved hjelp av helt andre verktøy og hjelpemidler. Det at fyrstasjonene i dag har mistet sin navigasjonsmessige betydning, mener Lauritzen er mye av grunnen til at de har forfalt.

– Jeg synes det er forferdelig ille at Norge som kystnasjon ikke tar bedre vare på den kulturarven vi har brukt ganske mange generasjoner og ganske mye penger på å bygge opp. Og det er kanskje litt av hensikten min med boka – å vise mulighetene, men også vise frem historien.

Han forklarer at han med boken ønsker å vise hvilken kulturskatt fyrene langs norskekysten representerer og hvor viktig det er å ta vare på den.

– Dette er en del av arven vår. Det faktum at Norge i dag er en velferdsnasjon, skyldes i stor grad kysten vår og de ressursene vi har kunnet høste. Vi brukte forferdelig mye tid og penger på å bygge opp et imponerende nett av fyr langs kysten i en tid der vi var en verdens fattigste nasjoner på 1700- og 1800-tallet. Nå er vi et av verdens rikeste land og vi klarer ikke å ta vare på det. Det er jo et tankekors.

Han mener det viktigste er at Kystverket får mer penger til å drive vedlikehold, allerede ligger de ifølge Lauritzen langt på etterskudd fordi de har ikke nok midler.

– Dersom Kystverket ble i stand til å øke innsatsen med vedlikehold, ville det bety svært mye for mange av fyrstasjonene. Da vil det bli enda lettere å markedsføre dem som fine turmål. Mye av fordelene til Norge som reiselivsnasjon er jo den fantastiske kysten vi har, og besøksfyr er fantastisk flotte turmål.



“

– Mange av fyrene er i dag fysisk vekk. Som oftest finner du kanskje bare en grunnmur, andre steder er alt borte.

source; fyr.no

## context

As architects we want to learn how we can adapt and reuse existing building structures and at the same time find the balance between challenging the conservation laws and be respectful of the cultural heritage

Lighthouse stations that were once lived-in have gradually been abandoned with the arrival of modern technologies. As it became a simple lantern, a place no longer inhabited by humans, many of the lighthouse stations have progressively deteriorated as it often happens to coastal buildings when their function expires. As structures with cultural and historical value how do we protect these buildings against deterioration?

The process of revitalization that many of the lighthouse stations have gone through has mostly been implemented by volunteers motivated by their personal interest. They have set a good example of how to keep these buildings in good condition, and opening them up for the public.

Some lighthouses have been labelled with a cultural heritage status, while some not have not.

There are many considerations to take when adapting this building type to new use; money, conservation laws, history, location, context and current light facility use.

## what

Through this diploma project we look into the potential that lies within this building type. and aim to answer the questions :

"What is a lighthouse in the 21 Century?"

and

"How does one adapt and reuse a building that has become decommissioned while showing consideration towards the economical, cultural and historical value?"



where

Along the coast of Norway, there have been 226 lighthouses, of these, up to 154 have been in operation simultaneously. Today, a total of 107 facilities are defined as lighthouses in Norway. To understand the similarities and the differences, their context and building type, we have mapped all the existing lighthouses.

We have zoomed in on three situations to further understand what they have meant, and can mean to the local community, landscape and to the network of lighthouse stations along the coast today. Three lighthouse stations each telling a story of their own with a new use that we hope will prevent these buildings to end up in ruins.

We used these different locations as opportunities to consider/explore the questions that drive the project .

1. **Makkaur lightstation:** located in Båtsfjord municipality in Troms and Finnmark county



2. **Træna lightstation:** located in Træna municipality in Nordland county



3. **Hendanes lightstation:** located Kinn municipality in Vestland county



*"When the lighthouse became electric in 1961, we got electricity in the house one hour a day, enough for an iron or a light bulb. We used primus and wood stove to cook food. There were fish for dinner five times a week. In the basement, we stored potatoes and carrots, and mother dried and salted food. Under the house we had a tank of drinking water, in addition we collected rainwater. We had to ration with the freshwater, and the rule was that we could wash clothes only once a month."*

*Sonja, Svenner Lighthouse*

troms og finnmark : 12 lighthouses

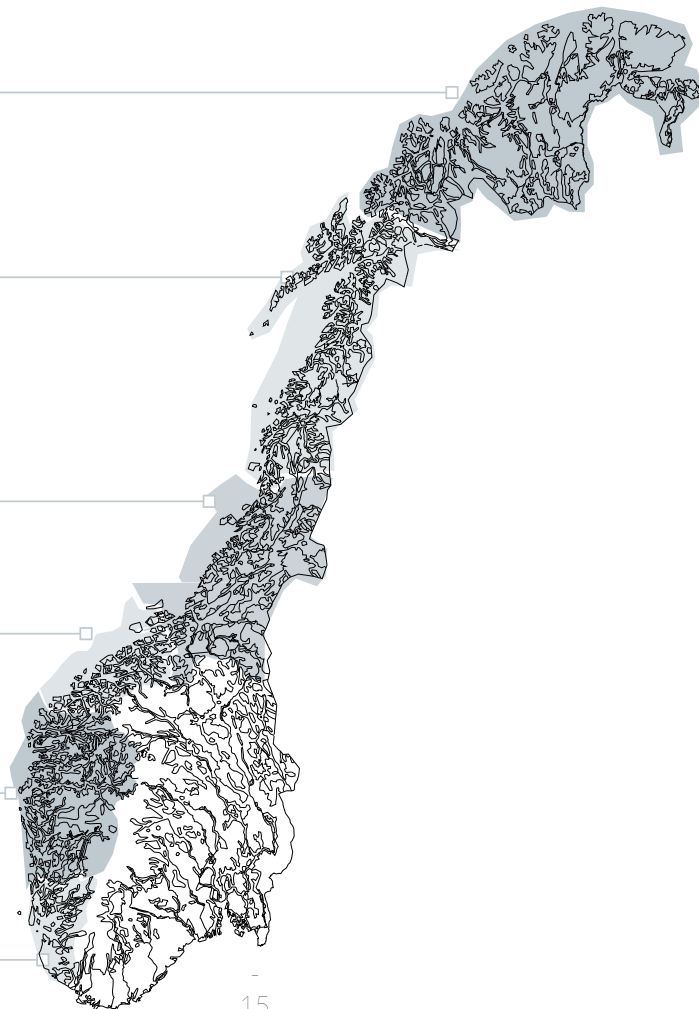
nordland : 42 lighthouses

trøndelag : 26 lighthouses

møre og romsdal : 31 lighthouses

vestland : 33 lighthouses

rogaland : 25 lighthouses





## how

We started our research by mapping the existing lighthouse stations along the coast of Norway.

Considering types, history, economy, cultural heritage, use, protection laws, and the landscape they are placed in, we then choose three lighthouse stations to explore the potential of new use.

To understand the impact we as architects can have in determining a new use, we worked in three scales: macro, meso and micro.

Based on the knowledge that we have gained through the mapping of the three scales we did design interventions that hopefully will give new life to the forgotten and neglected lighthouse stations.

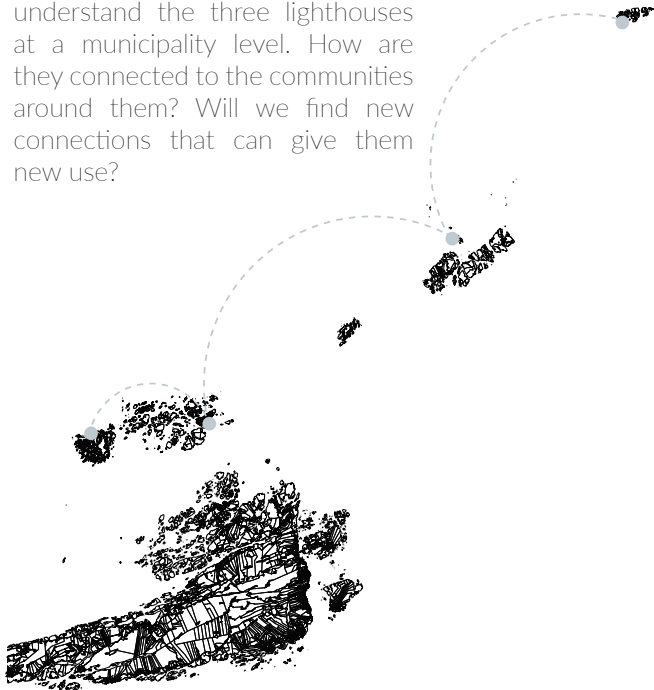
## macro scale

In the macro scale we looked at the 226 lighthouse stations along the coast of Norway and mapped them into different criteria. Which ones are protected, and which are not? Which ones are in use and which ones are in danger of deteriorating? What are the different typologies and use today? Are the network of lighthouse stations somehow connected?



## meso scale

At the meso level we seek to understand the three lighthouses at a municipality level. How are they connected to the communities around them? Will we find new connections that can give them new use?

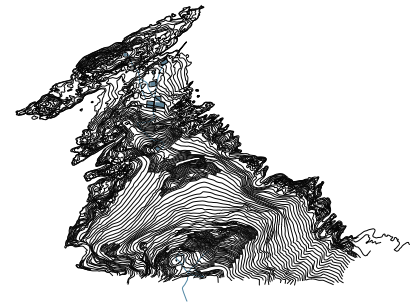


## mirco scale

A the micro-scale, we zoomed-in at the three lighthouse stations we choose based on the mapping from the macro- and meso-scale.

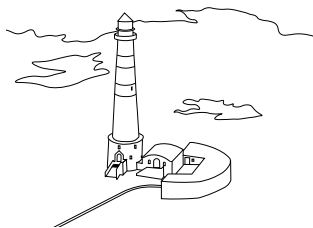
Understanding the landscape they are in, the history of the lighthouse stations and the communities, and the state they are in today.

We did registrations of the lighthouse station's constructions and materials.



## lighthouse type

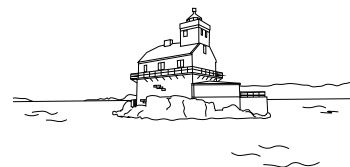
Lighthouse stations can be categorized into six building types:



Sletringen - Trøndelag

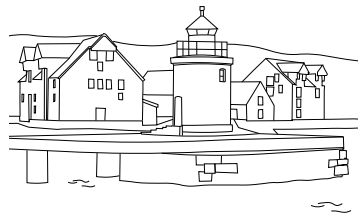


Tranøy - Norland



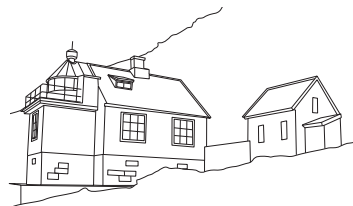
Stabben - Vestland

## Coastal lighthouses



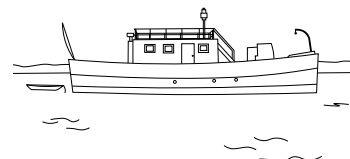
Molja - Møre og Romsdal

## Harbour lighthouses



Hellevik - Møre og Romsdal

## Fishing lighthouses



Ildjærnsflu - Viken

## Lightship

## landscape

Many of the lighthouses are often placed in uncontaminated landscapes and vulnerable ecosystems.

Our intention is to highlight and be respectful of the landscape the lighthouse stations are situated in. We do this in order to attach to nature. It is fundamental for us to think differently and have a relationship with nature if we want actions towards a more sustainable future.





family life at Ryving lighthouse station

## life at the lighthouse

What kind of life did they live at the lighthouse stations along the coast?

The stations were not only a solitary place. Many of the stations had several families living together, it was a small community.

The community at the lighthouse stations are now gone after the light was automated.

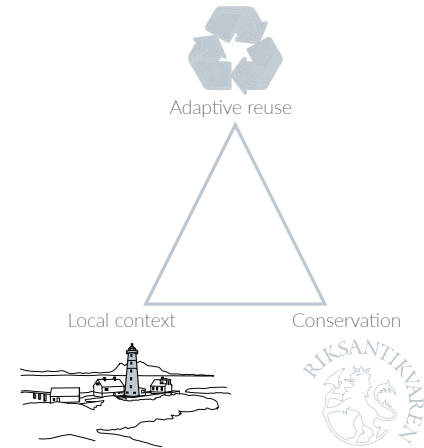
We aim to bring life back to the stations, in order to keep them from decaying . To prevent cultural heritage from being lost.

## strategy

The lighthouse stations along the coastline of Norway have for centuries been a place to take shelter, to live, observe and assure for a safe passage for sea vessels.

After the automation and abandonment of many lighthouse stations along the coast, some have been left to deteriorate and for some that have resulted in a removal.

The network of lighthouses could be seen as an idea of solidarity. They are found on all coast in all countries. The lighthouse does not choose who they shine for, but show the way for everyone. In this project, we use turning the switch on again as a metaphor for finding a new direction for the buildings, programs that re-introduces life back to the stations. We hope that this diploma can show the potential that lies within these buildings, placed in often uncontaminated landscapes.



The triangle illustrates the strategy we propose, when dealing with this typology.

In order to keep the lighthouse stations from deteriorating, we want to adapt and reuse these decommissioned buildings to a new program that could introduce life back to the stations. Through using the local context, we want to establish a stronger connection between the station and surrounding communities.

The strategy also touch upon the conservation laws. Are the laws put in place too restrictive or is it the lack of a protection law that has lead to the deteriorating?



*"the lamp was lit half an hour before sunset every night. I remember the men carrying heavy jugs of oil up to the lighthouse to light the oil burner. In the fog, cannons were fired every 10 minutes, and in the winter they had to scrape ice off the glass of the lighthouse."*

*Sonja, Svenner Lighthouse*

01  
jan

04-05: draft presentation

social science essay

21 : deadline essay

25 : ws- typo. landscape

02  
feb

03 : ws- pavlina

08 : program delivery

03  
mar

04-05 : PRESENTATION-  
conceptually elaborated  
material

09 : lec. sustainability intentions  
10 : lec. sustainability landscape

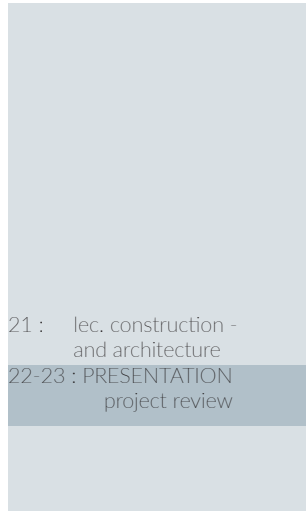
15 : 1:1 day, inspirational  
16 : 1:1 task, voluntary practical

18 : lec. structural design

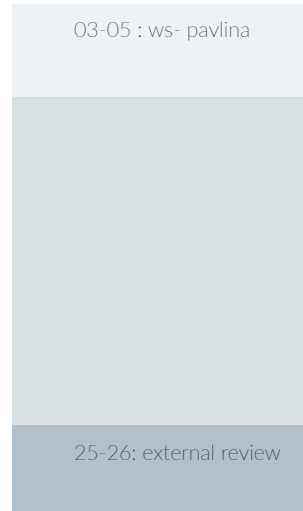
24 : ws. pavlina



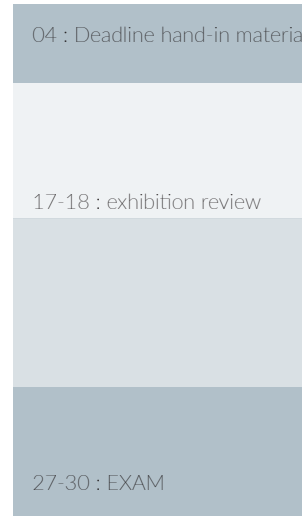
04  
apr



05  
mai



06  
jun







## info

Elisabeth Drønen

29. April 1989, Bergen

Bergen, Vestland, Norway

+47 48 11 27 16

elisabeth.droenen@gmail.com

## education

Master in Architecture

Bergen School of Architecture

2015-2021

Master in Structural / Earthquake Engineering

San Francisco State University

2013-2015

Bachelor in Structural Engineering

Bergen University College

2009-2012

## work

Assistant Bergen Kommune Bergen	2017-2020
Shop assistant Zavanna, clothing store Bergen	2016- 2018
Engineer AK Miljø Bergen	2015
Engineer ( various employments ) Aker Solutions Bergen	2012-2014

## master courses

Complex Context "Bridging gaps"	Fall 2020
Moving Through "Edges in landscape"	Spring 2020
Open Form - New Wood "Public BAS"	Fall 2021



## info

Thea Lindseth

30. Juli 1978, Trondheim

Bergen, Vestland, Norway

+47 92 46 36 31

[thealindseth@gmail.com](mailto:thealindseth@gmail.com)

## education

Master in Architecture  
Bergen School of Architecture

2015-2021

## work

Receptionist, 2015-2019  
KODE Art Museum  
Bergen

Receptionist & assistant store manager 2014-2015  
KODE Art Museum  
Bergen

Entrepreneur, owner and store manager 2007-2014  
En Gul Knapp AS  
Childrens clothing store  
Bergen

Store Manager 2003-2007  
Kremmerhuset AS  
Bergen

## master courses

Complex Context  
"Bridging Gaps" Fall 2020

Vanishings  
"Filtered dwelling" Spring 2019

Open Form - New Wood Fall 2018

## images

Makkaur fyr Travel-Finnmark	1
Holmengrå fyr Grind.no	4
Runde fyr Fyr.no	5
Grip fyr Fyr.no	9
Træna fyr Fyr.no	12
Makkaur, Træna and Hendanes Fyr.no	13
Lundefugl ved Runde fyr Marius Dalseg Sætre	19
Family life at lighthouse Martin Guttormsen Slørdal	20
Kya Fyr Fyr.no	22

## literature and quotes

Norsk Fyrhistorisk Forening Fyr.no
Norsk Fyrstasjoner Per Roger Lauritzen

# DIPLOMA PROGRAM

spring 2021

Elisabeth Drønen  
Thea Lindseth

Bergen School of Architecture  
Sandviksboder 59-61a  
5035 Bergen  
Contact: +47 553680, adm@bas.org

## Tutors:

Sverre Sondressen (APP)  
Hedvig Skjerdingsstad (DAV)  
Kim Christensen (TTA)  
Marco Casagrande, Architect  
Nancy Couling, Architect

## Helpers:

We have had help with model work and building 1:1 installation.  
Sindre Kartvedt, Architect  
Per Kartved, Retired  
Anne Marthe, Economics and business administration student