STORIES OF HISTORY

INTERVIEWS, FIELD WORK AND RESEARCH

ORIENTKAJ: A CONTEMPORARY FISH MARKET



ALEXANDER MIHEL 170320 AMIRA MATLAND 160367

SPATIAL DESIGN 2023 DET KONGELIGE AKADEMI ARKITEKTUR DESIGN KONSERVERING

7	INTRODUCTION
9	FISH MARKETS IN COPENHAGEN
25	FISH MARKETS IN SCANDINAVIA
41	LOCAL SEASONAL FISHING
45	SMALL SCALE/BIG SCALE
53	ACTORS
67	STRUCTURAL CONSIDERATIONS
69	PRE-FAB
71	FOUNDATION
73	PILES
75	WALLS
77	ROOF
78	FIGURE REFERENCES

INTRODUCTION



This book is the third part of our analysis, and can be read after the Atlas of Coastal Identity. It is where we have collected our research and considerations around scale, programmatic intentions, materials and construction.

Stories of History consists of research and aqcuired knowledge around the practicalities involved within the project.

FISH MARKETS IN COPENHAGEN

GAMMEL STRAND



1

Gammel Strand, once the coastline in Copenhagen, was the main sales site of fish in the city from around 1700 to 1959. The market by the canal was known for its sellers. "Fiskekonerne" or "Skovserne" were wives of fishermen from Skovshoved. Their role involved carrying fresh fish off the boats and bringing it through the canal to sell at the market in the city.

Pictures from the fish market may convey an unstructured landscape of sellers and buyers, but there was a regulated plan for the market. It was open from 06.00 to 14.00 on weekdays and consisted of 1.200 m², where 960 m² was operated by sellers. By the end of 1930 the area was divided between 132 tables, where 67 were reserved for fisherwives, 27 for port traders, 22 for commissioners and 16 for non-returning sellers fx fishers that on occasion would show up.

Though the market was popular, it had many weak sides. It was outdoors - all year round. This was a problem for cooling the fish properly. No offices or meeting rooms meant that many deals would have to be done within small bars and restaurants in the neigbourhood. But the biggest problem was the weathers detrimental influence on the fish, proving to make the market an unstable business.



THE FISH MARKET. TAKEN AROUND 1943.





THE LAST FISH SELLER AT GAMMEL STRAND IN 2008.



FISKETORVET



2

The fish market at Gammel Strand was oficially moved in 1958 after 152 years of talking. The move marked a shift in the type of trade, as it went from selling to private buyers to now only selling to wholesale traders. The market was now closed for the public. The fishermen's wives protested the move and reinstatement, and were given a deadline of five years extra at Gammel Strand.

3-4000 fishmongers marched in unison through the town wearing their white coats. The characteristic wooden barrels with fish were gone from the city center. Tied together in long lines they were dragged through the canal. The boats were decorated with danish flags for the occasion. Many Copenhageners stopped, watched the procession, and rejoiced on behalf of fishermen and fishmongers.

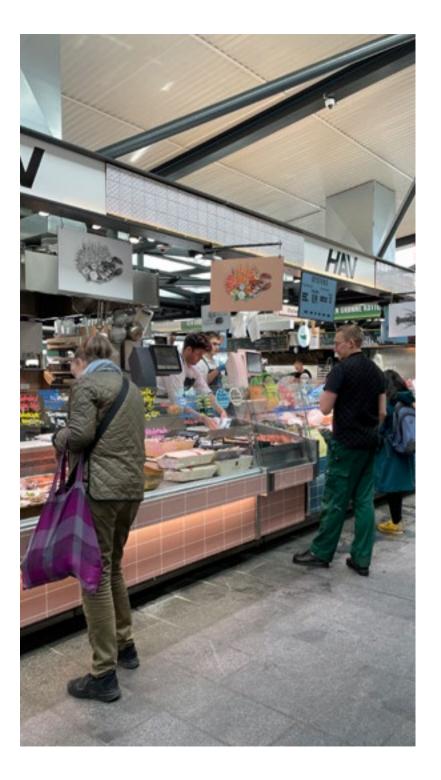
The convoy with fish barrels went to the new fish market in the southern part of Gasværkshavnen off Dybbølsbro. A modern sales hall had been built there, which was 3,100 square meters in size. Finally they marched into the first of the halls where welcome speeches, wine and wreath cake awaited.









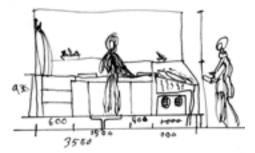


TORVHALLERNE

3

The popular food market is located on Israels Plads in Copenhagen. When it was completed in 2011, the city had been without a public food market since Grønttorvet, a vegetable market located on the same ground, closed in 1968.

Torvhallerne is inspired by classic open air markets in Europe and the indoor market consists of two identical metal structures serving as a roof to a rigid, symetrical plan of stalls. There is a total of 55 stalls indoors, and outside there is eating areas and outdoor stalls.



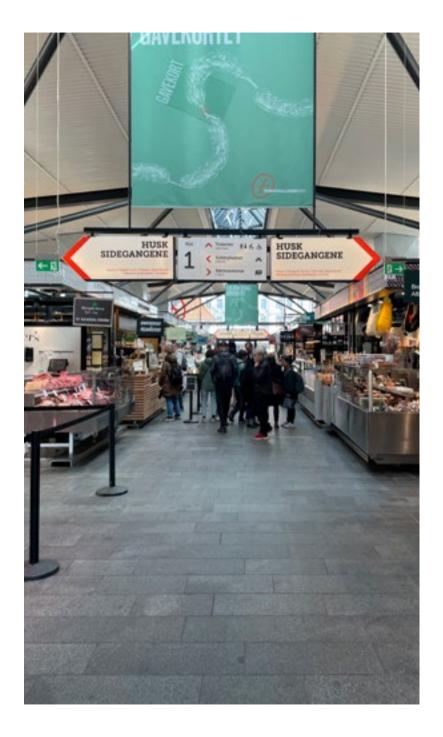






PHOTO: AUTHORS

PHOTO: AUTHORS

FISH MARKETS IN SCANDINAVIA

FISKEHODDORNA



4

The fishery huts in Malmö is a fish market that contains a long of history. The huts were constructed in the second half of the 18th century, but the tradition of fishing stretches back to the middle ages. Like many cities along the coastal line of Skåne, Malmö was once a small fishing village.

During the 1950s, the importance of fishing decreased for Malmö. The fish was imported and the trade was taken over by wholesalers. The huts were threatened with closure, but the few professional fishermen who were still active donated their huts to the museum of Malmö with the proviso that they would be allowed to use the sheds during their lifetime. The huts were relocated to a new area, but the identity of the fishing community was, at a smaller scale, kept intact.

Today the small scale fishermen fish and sell their own fish and meet consumers face-to-face. Freshness is a key quality parameter to achieve, and the fish is carefully selected and fileted. In addition, the fisherman has direct contact with the customers when they come to pick up the fish. Keeping the customer happy, as well as satisfying customers' concerns for the marine environment, thus become necessary aspects of this fishing practice. In return, the fisher is paid a remarkably higher price per kilogram of fileted fish.



EXCERPT FROM INTERVIEW WITH BLÅ HODDANS FISK 01.03.23

We speak with Sölve at Blå Hoddans Fisk on a cold winter morning in Malmö. He runs the fishery hut along with two others and a couple of employees. They are all fishers, and spend their time on the sea when they dont run the shop. The market is placed a just outside of the city center down by the water. During our short visit, we see many customers arriving in cars next to the market to buy fish.

What is most popular among the buyers?

We sell a lot of cod and salmon, that is most popular. But at this time of the year there is restricted fishing in the Baltic sea, so we buy from Norwegian trawlers even though we dont like to support trawling its the way to make the business go around for small scale fishers like us.

Is it expensive to sell fish in this way?

Since we fish ourselves, or buy directly from other fishers we can keep the prices for fresh fish at a very reasonable rate.

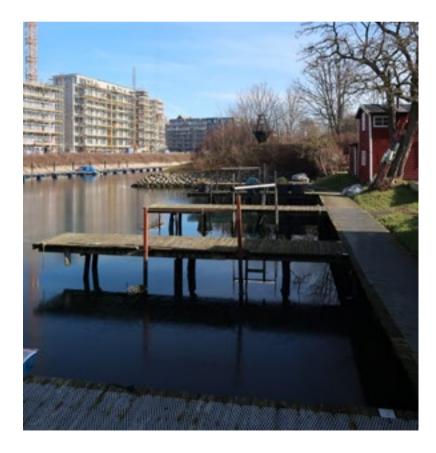
If you could add something to the fish market to make it better what would that be?

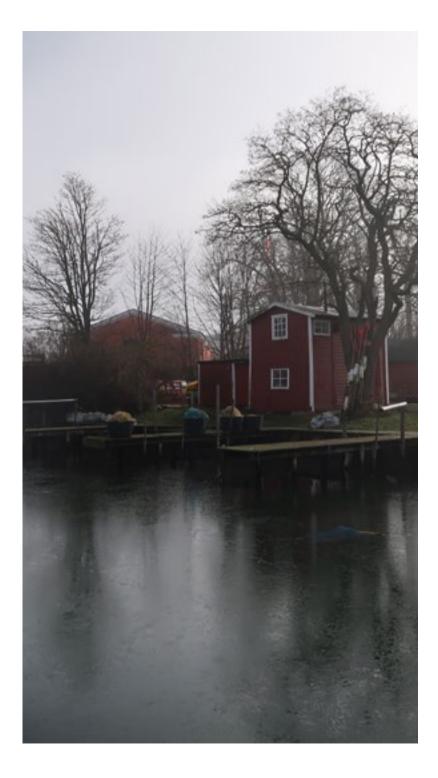
We have already expanded with a restaurant, and now we are thinking about expanding with a wine bar, because we think it could attract a broader customer group to the market.

So the fish market in itself is not enough?

No, but we are fishers and this is our passion and its really important for us to keep the tradition of the market alive. The additions are a good way to bring people down to experience what we think is so special with our location here by the water.







FESKEKÖRKA

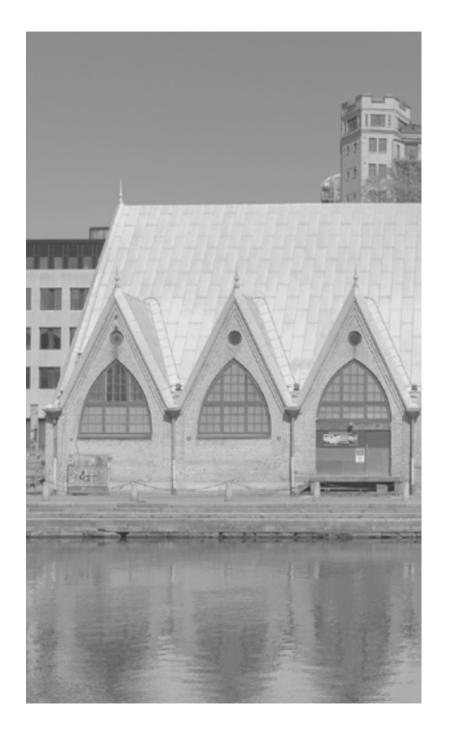


5

The fish church in Gothenburg was inaugurated in 1874. The characteristic appearance of the building was created by the swedish architect Victor von Gegerfelt.

The building is inspired by norwegian stav churches and gothic stone churches, and it consists of one large room. The wooden triangular construction made it possible to have a large pathway in the middle of the room without pillars. The drawings of the building showed how it could be expanded in lenght, in case of increasing demand, but the room with arrangements for 12 sellers has proven to be sufficient.

Over the years, the fish church has developed into Gothenburg's leading place for selling fresh fish. Inside there are two small restaurants where visitors can order seafood platters and fish dishes. You can also order catering with sandwiches and platters of various kinds. They have a large selection of locally caught seafood and it is the place to go to buy fresh crab, monkfish or plaice. When buying fresh produce from the sea, you also get recipes and information about the preparation.





FISKETORGET



6

Torget in Bergen, often called Fisketorget, is an area in the city that has been used as a market since early in the city's millennial history. It is especially known for the sale of fish and seafood, and has become a major tourist attraction in recent decades.

As both a coastal and trading city, Bergen has always been a place where fishermen have come to sell their catch. Many people from Bergen still have a nostalgic relationship with Fisketorget as a place where you could buy fish straight from the boats that lay by the quay, or live fish from basins on land. Changing requirements for hygiene and control together with a change in people's shopping habits led to a reorganisation and decline in the business on Torget. Today the market varies greatly between the summer and winter seasons, where tourism dominates the outdoor market in summer, while activity in winter is limited to indoor sales in Mathallen, which was completed in 2012.

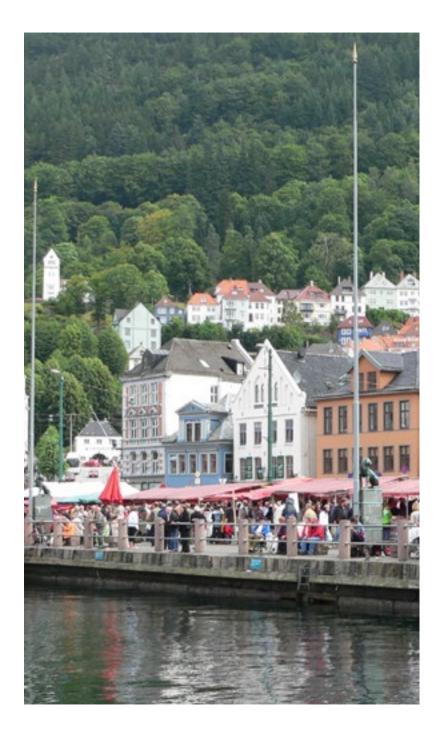






PHOTO: PHOTO: VISITBERGEN

LOCAL SEASONAL FISHING

Find fisken!

De forskellige fokearter foretrækker hver deres miljø og opholder sig på særlige lokationer i havnen. Nedenstående kort er solviklet med hielp fra erfame betfalare og giver et samlet overbilk over hornes og dens muligheder for fakere.



OCTANKAJ Tarak, sej, makinel, silet, homefoik, heremet, excelor, long. missaria, ult. Institute, B

ORIENTKAJ Territ, sej, skrakter, leing, semperter, makers), and, have read, \$2

SANDKAJ. Tarak, anj, makimi, aliki, horofak, havenuel, addidging, tartiganting, up instant B

LANGELINUE Tares, sej, makrel, elsi, hornifas, newrood stration long, witcomfin, of Instance

REPSHALLBEN / TREKRONER Tarok, esj, elst, skrukter, recispenter, luing, havernet, hanriker, B

OFFILIA PLADS Territ, sej, slot, skrubbe, luing makers; hondel, hevernet, knattere, ill

NINAVA Territ, advertis, Bill

KANALERNE MORE BY Malla, charge, borok, B

CHRISTIANSHAVNS KANAL

SUUSEN Tarch, sej, and, skrabbe, long, makes, hardel, hevernet, 8, abore

Her kan du se, hvornår på året de forskellige arter er repræsenteret i havnen

TOPEK Finites have lead, man transier set of Patrinet i gen serve vinler, ogsi deri sarine

58.1 Carrie 12 relative ere reget for second to second

MACHE Party of another terminal or intuity for subort stannakerer Keltefter løger de pæne mæreller De landes i also sassiver lig hanarsi i telle sver tha magaziné sebatani

56.D failer and all exemple over the reacted."

inclusion of the Respects for featible station and seget couldn't of april Rabehavit, Findes I sturt antal Costhermon Reparation, even Trides I hele harmen

MATT Multime or some at large. De broager og iarga must og eknadtanger og autorene.

SKRUBBE Elevence note devel, more an units og guess som vinner og tidnigt fande *

ISING. Falsies i ministre wither i inderhammen hale week.

RECORDETTE Or links satisfying the manys relocation Devisionary, even as some at hide timemonificant dark of Advanced

KING SHARE En sjølden på et, der implie skonneret føre pange

ALC: N Subden, mer findes these funnet. Enclosemendent*

ABORRE

Virubia) Spall (dat mente al traviero, mentanimo ment I des surligs del al'hourses.⁴

INFURIESCO. og States

JPS 103 1844 AVR BOU JUN JUL AUG 204 DAT 1007 DEC

_	-	 		_
				_
		_	_	_

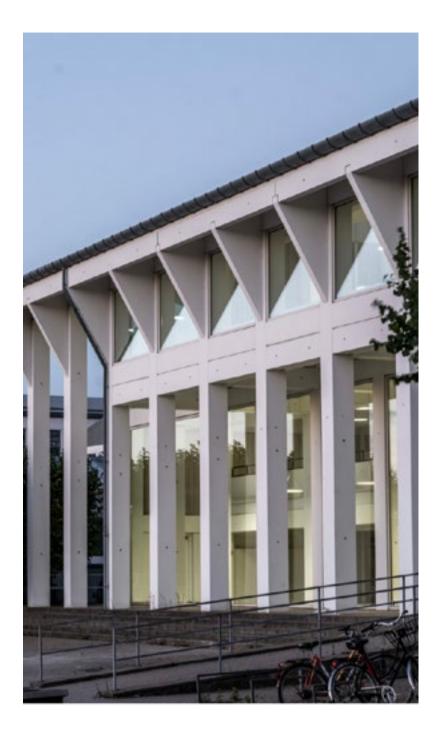
And a series where we are series and a series in the series where we are series in the series in the

and the owner of the

Personal Personal Personal Personal Personal

Starti darin in si casi in anti ny futuren

SMALL SCALE/BIG SCALE







PLADEVÆRKSTEDET

LA BANCHINA







CHRISTIAN IV BREW HOUSE KANONBÅDSSKURENE







MASTEHUSENE MASTEHUSENE

ACTORS

BY OG HAVN

7



EXCERPT FROM E-MAIL CORRESPONDANCE WITH BY & HAVN 14.03.23

Has there been or are there any existing plans to make a yearround fish market in extension to Copenhagens waterfront?

Years ago, a very beautiful stage was built to be on the water, intended for cultural performances such as theater and music. Unfortunately, the scene was not stable as soon as there were some waves on the water.

At one point, there was a group of people who were very close to rebuilding the stage into a fish market, which they wanted to place at Havnegade. But there was an issue with money so the market was never materialized. The parts of the stage still floats in Slusen in the southernmost part of the harbour.

What is By & Havns strategy in terms of preserving the existing port character while creating recreational spaces along the harbour?

By & Havn has worked very consciously in Nordhavn with the preservation of cultural traces from the days of the commercial port. This applies to buildings, recycling of cobblestones, preservation of bulwarks and mooring rings. We are also establishing public urban spaces along the harbour. For example, Sandkaj and Gøteborg Plads. At the tip of Redmolen and the tip of Sundmolen there is also a public space.



Are there any constraints from By & Havn side in regards to build on the waterfront? For example in extension of the stairwell at Orientkaj?

We provide master plans for the individual city districts, most often when conducting architectural competitions. Master plans define a special character for the individual city quarter and a building or facility must live up to this character and its inherent qualities.

There is no provision for "building space" on water in the current local plan, but there could well have been. In the Århusgadevarteret, two buildings on water have been made possible.

In addition, it can be stated that the municipality cannot do local planning on the water unless it is done in connection with urban development, and that the Department of Transport must approve buildings in the water (in addition to the building permit from the municipality). By & Havn must also carry out a maritime assessment of a building. If it is a question of navigable/floating elements, By & Havn must grant permission for this, which will be accompanied by a rental agreement and, correspondingly, there is an expected need for permissions from the Danish Maritime Authority.

LOCALPLAN



8

In the current local plan of Orientkaj made by the municipality in 2018, there are several new canals constructed, but it does not explicitly indicate any building plot on water.

However, in several illustrations as well as the visionplan developed by By og Havn for the new Nordhavn we see that the area is branded as a water district. This includes new canals as well as parks and building plots on the water.





THE HARBOURBUS

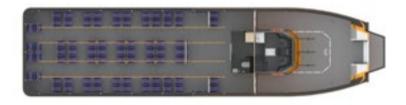


9

The electrical harbourbusses in Copenhagen sails every 30 minutes through the route in the harbour. In April 2019, the harbour ferry service was extended from Refshaleøen to Nordhavn and a new ferry terminal at Orientkaj, the journey time from Nyhavn to Orientkaj will take 39 minutes.

Movia, the operating company, have added two new electricpowered ferries to their current fleet of five. The electric ferries came into service in 2019 and each can carry 80 passengers and with space on the front deck for eight bikes and four wheelchairs or prams.







10

The train is designed to accommodate many commuters travelling short distances in the Metro. Each side of the train has six wide doors, and roughly 100 of the 300-person capacity is for seated passengers, the rest standing.

The seats face each other except at the ends of the train where they are in rows so passengers can look out of the large front windows. There are four large 'flex zones' with folding seats along the sides, providing space for wheelchairs, prams and bicycles.





STRUCTURAL CONSIDERATIONS

PRE-FAB

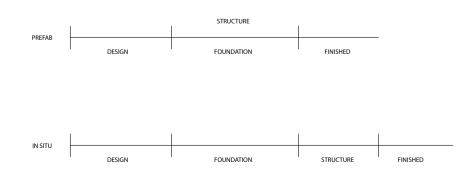
11

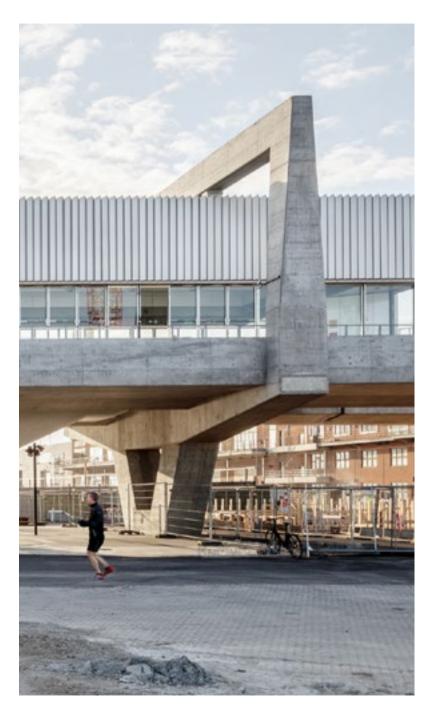
During the project we have considered different construction methods regarding building on water and how to best solve it for this project.

To limit the amount of construction time on water, we see the advantages of a pre-fab concrete construction.

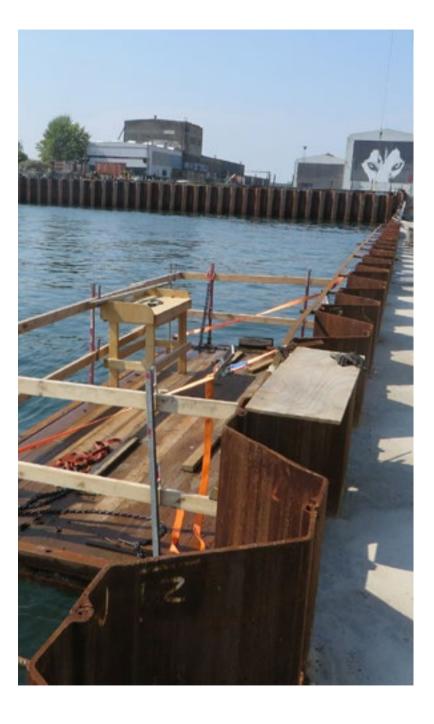
Using prefab-elements means that the foundation construction in water and fabrication of concrete elements can happen simultaneously, leading to a faster completion time. This also makes sure that the pre-fab elements are constructed in controlled environments.

PREFAB VS IN SITU CONCRETE TIMELINE





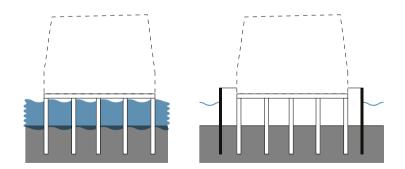
FOUNDATION



12

For the foundation sheet piling is preferred to secure a stable and precise construction. The desicion builds upon the exisiting tradition and expertise within the construction entrepeneur firms in Copenhagen, where sheet piling has a long tradition.

PILES FOUNDATION CONSIDERATIONS



PILES

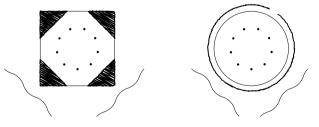


13

For the piles rounded shapes are preferred to avoid unecessary distress on sharp edges, due to the forces of water movement.

The addition of piles in the industrial harbour can create a larger growing ground for life beneath water. Looking at the project As Close as We Get by Superflex, where concrete piles are placed in the harbour of Copenhagen 2022, to give a larger surface area for inhabitation beneath the water as well as being sculptural pieces. The project is monitored by DTU Sustain and they are planning to place 55 km2 of reef in the Danish oceans.

PILES SHAPE CONSIDERATIONS



WALLS





14

For the concrete walls we have considered the possibility of referencing the process of coral reef.

The process happens beneath the water, when algae, micro biome and other species cling to existing surfaces, die and new life reinhabit on top. It becomes a growing structure that adds to the former shells structures, creating an uneven and poruous surface in the process.







ROOF

15

The roof will be a CLT pre-fab construction which is beneficial as it allows the shape of the roofs to have a flexibility allowing a unique shape to the interior space while still ensuring a solid and simple construction.

The roof layering is able to intentionally reveal or hide isolation and construction depending on the room. Allowing to create singular atmospheres in the different spaces.

For isolation and accoustic properties we have considered to use locally produces eel grass panels. Creating a contrast between the lighter beams and the darker panels.

CLT BEAM SPLIT ASSEMBLY CONSIDERATIONS



FIGURE REFERENCES

FIGURE 1 PHOTO:	KBH BILLEDER — PAGE 10	FIGURE 25	PHOTO: VISITBERGEN — PAGE 38
FIGURE 2 PHOTO:	KBH BILLEDER — PAGE 12	FIGURE 26	PHOTO: — PAGE 39
FIGURE 3 PHOTO:	KBH BILLEDER — PAGE 13	FIGURE 27	PHOTO: VISITBERGEN — PAGE 39
FIGURE 4 PHOTO:	KBH BILLEDER — PAGE 13	FIGURE 28	PAUSTIAN HOUSE — PAGE 46
FIGURE 5 PHOTO:	HOVEDSTADSHISTORIE.DK — PAGE 14	FIGURE 29	PLADEVÆRKSTEDET — PAGE 47
FIGURE 6 FISKETORVET. PHOTO: KBH BILLEDER — PAGE 16		FIGURE 30	LA BANCHINA — PAGE 47
FIGURE 7 PHOTO:	KBH BILLEDER — PAGE 18	FIGURE 31	GAMMEL STRAND — PAGE 48
FIGURE 8 PHOTO:	KBH BILLEDER — PAGE 19	FIGURE 32	CHRISTIAN IV BREW HOUSE — PAGE 49
FIGURE 9 PHOTO:	WESTFIELD — PAGE 19	FIGURE 33	KANONBÅDSSKURENE — PAGE 49
FIGURE 10	PHOTO: AUTHORS — PAGE 20	FIGURE 34	KNIPPELSBRO BRIDGE TOWER — PAGE 50
FIGURE 11SKETCH	I OF STALL AREA IN TORVHALLERNE — PAGE 21	FIGURE 35	MASTEHUSENE — PAGE 51
FIGURE 12	PHOTO: AUTHORS — PAGE 22	FIGURE 36	MASTEHUSENE — PAGE 51
FIGURE 13	PHOTO: AUTHORS — PAGE 23	FIGURE 37	BY & HAVN OFFICE DOMICILE. — PAGE 54
FIGURE 14	PHOTO: AUTHORS — PAGE 23	FIGURE 38 1950 — PAGE 56	KBH BILLEDER. ORIENTKAJ AS PART OF FRIHAVNEN FROM 1890-
FIGURE 15	PHOTO: AUTHORS — PAGE 26	FIGURE 39	COPENHAGEN MUNICIPALITY, LOCAL PLAN 2018 — PAGE 58
FIGURE 16	PHOTO: AUTHORS — PAGE 28	FIGURE 40	CF MØLLER THE NEW NORDHAVN DISTRICT 2015.
FIGURE 17	PHOTO: AUTHORS — PAGE 30	ORIENTKAJ. — PA	
FIGURE 18	PHOTO: AUTHORS — PAGE 30	FIGURE 41	MASTERPLAN NORDHAVN, COBE 2008 — PAGE 60
FIGURE 19	PHOTO: AUTHORS — PAGE 31	FIGURE 42	HARBOURBUS ROUTE. DANISH DESIGN REVIEW. — PAGE 62
FIGURE 20	PHOTO: NORDISKA MUSEET/DIGITALT MUSEUM.	FIGURE 43 MOVIA. — PAGE 6	ELEVATION AND SECTION OF HARBOUR BUS.
1952. — PAGE 32		FIGURE 44	M4-LINE ROUTE. METRO COMPANY. — PAGE
FIGURE 21	PHOTO: NORDISKA MUSEET/DIGITALT MUSEUM — PAGE 34	64	
FIGURE 22	PHOTO: HANS T DAHLSKOG/SCANPIX — PAGE 35	FIGURE 45 COMPANY. — PAG	ELEVATION AND SECTION METRO CAR. METRO
FIGURE 23	PHOTO: GØTEBORGS POSTEN — PAGE 35	FIGURE 46	EMBRACING THE AESTHETHICS OF PRE-FAB. METRO STATION
FIGURE 24	PHOTO: VISITBERGEN — PAGE 36		2021. — PAGE 68

FIGURE 47	SHEET PILING AT REFSHALEØEN. BY & HAVN. – PAGE 70
FIGURE 49 2013 — PAGE 72	FABRIC FORMED CONCRETE COLUMNS, KADK WORKSHOP
FIGURE 48 AQUA AND BY & HAV	SUPERFLEX, AS CLOSE AS WE GET, 2022. COLLABORATION DTU /N. — PAGE 72
FIGURE 50 ROLLER SLEEVE —	TEXTURISING CONCRETE FACADES. REFERENCE: TRU TEX PAGE 74
FIGURE 51	CORAL STONE WALL. — PAGE 74
FIGURE 52 KARSTEN DAHL. —	REEF AT MØNS KLINT, 17 M DEPTH. MUSSELS DOMINATE. PHOTO PAGE 75

FIGURE 54 CLT BEAM CONSTRUCTION. ARCH20. — PAGE 76

FIGURE 53 ACCOUSTIC EEL GRASS PANELS. SØULD. — PAGE 76