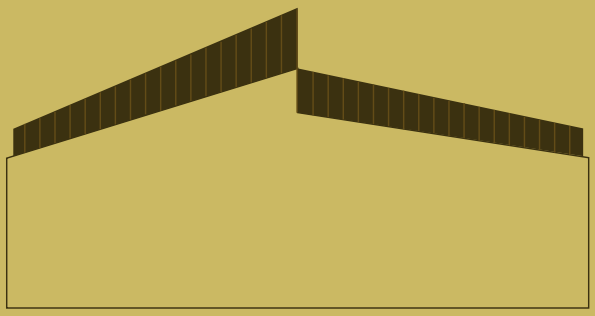

Sælvig Beach hotel

A social and environmental transformation that incorporate gastronomic tourism in a coastal area.

Spring 2022 | Master Of Science 04 | ARK 19

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Last but not least, our colleagues through both bachelor's and masters for the inspiring and creative study environment and fun times together.
We appreciate you all for the help and support you have provided for us all the way to the end.

Illu. 1. Atmospheric picture of Samsø

0.3 Abstract

This is a design proposal for a beach hotel on Samsø, Sælvig Beach hotel. The project has used the Integrated Design Process with Generators that have steered the process through the rapport. The rapport goes through the process behind and how the group have justified the different decisions that have led to the final design. The rapport has investigated the framing for the report through Sustainable and Gastronomic Tourism together with the understanding of the site. The site is also analysed through the microclimate and terrain of the site together with the biodiversity of the context. Case studies of Svinkløv Badehotel and Noma 2.0 have given the group an understanding of functions and elements of staging that can be taken further into the design.
This has led to the design of Sælvig Beach hotel, which has transformed the old concrete factory into an classy hotel. The hotel is a small local grown-up hotel that focuses on giving the guest a memorable experience of Samsø through the food and activities, and also through the hotel's placement and material choices well as the view of all directions that showcase the nature and landscape of Samsø.

0.3 Abstract Danish

Denne rapport viser et designforslag til et badehotel på Samsø, Sælvig Strandhotel. Projektet har brugt den integrerede designproces med generatorer, der har styret processen igennem rapporten. Rapporten gennemgår processen bag, og hvordan gruppen har begrundet de forskellige beslutninger, der har ført til det endelige design. Rapporten har undersøgt rammerne for rapporten gennem bæredygtighed og gastronomisk turisme sammen med forståelsen af stedet. Lokaliteten analyseres også gennem stedets mikroklima og terræn sammen med biodiversiteten i konteksten. Casestudier af Svinkløv Badehotel og Noma 2.0 har givet gruppen en forståelse for funktioner og elementer af iscenesættelse, der kan tages længere ind i designet.

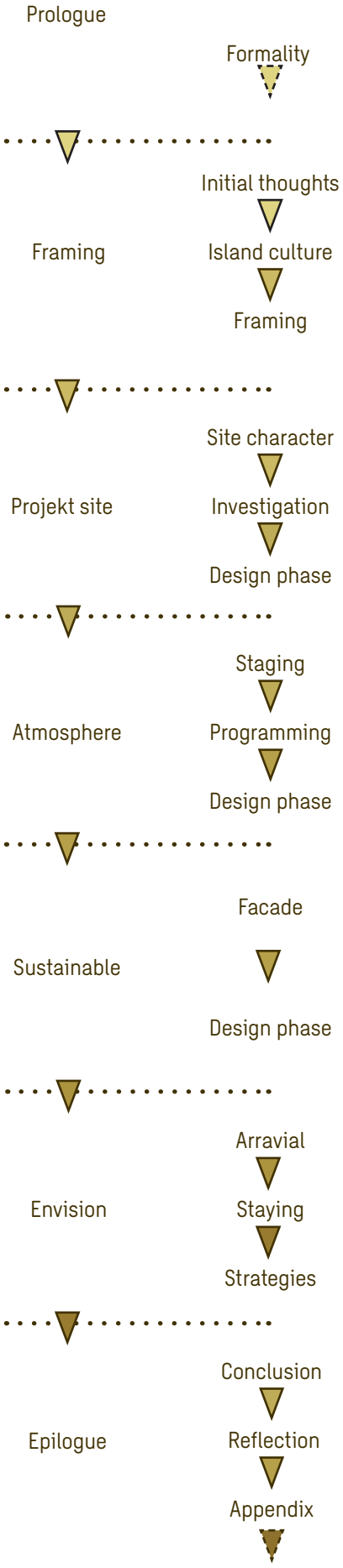
Det har ført til designet af Sælvig Strandhotel, som har omdannet den gamle betonfabrik til et eksklusivt hotel. Hotellet er et lille lokalt voksen-hotel, der har fokus på at give gæsten en mindeværdig oplevelse af Samsø gennem maden og aktiviteterne, og også gennem hotellets placering og materialevalg samt udsigten til alle retninger, der viser naturen og landskabet af Samsø.

0.4 Readers guide

The project follows the Integrated Design Process but with a twist of generators throughout the process; more on this in 1.3 Methode.
The rapport can be categorised into three parts: the Framing, the Proces and the Presentation. The Proces has been divided into three generators based on the outcome of framing: Site, Atmosphere and Sustainable.

The report has been divided into categories and the three generators. In a total of 5 parts, it has been told as a linear process, even though it has been an iterative process, of going back and forth between the generators. The linear approach is made to most straightforward display the thought process behind the final design. Each generator is divided into a research part and a design process. Each of the five parts start with a short introduction and a diagram that shows what the chapter is about.

Through the rapport, there are used sources to gain knowledge, these will be referenced by Harward reference style in the texts as well as in a litterateur list last in the rapport. All illustrations will be numbered, and all but the groups own will be listed with credit in the illustration list later in the rapport.



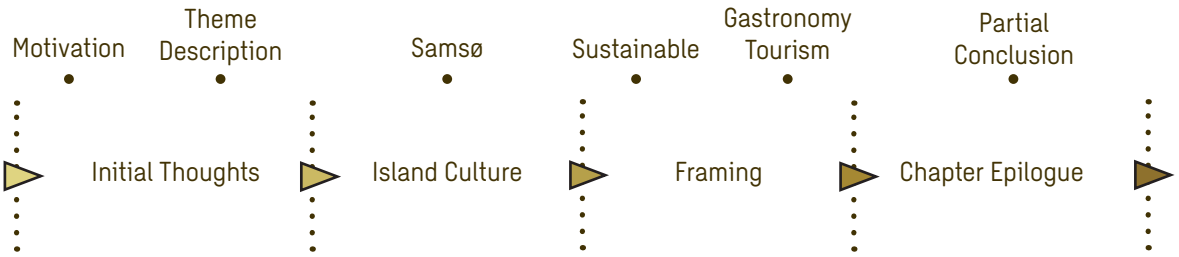
Illu. 2. Thesis structure

0.6 Content

Illu. 3. Atmosphere picture of Sælvig Bay

1.0 Framing

In this chapter, the group will examine the project's framing. There will be investigated the initial thoughts to understand what, why, how, and to whom the project wishes to be achieved. To better understand the site and Samsø as an island, this is explored and leads to more exploration of specific topics within sustainability and gastronomy tourism, which have led to the generators for which the project is being steered, which are the Site, Atmosphere and Sustainability. These will be analysed and designed from in the following chapters.



1.1 Motivation

In the modern world, we are faced with many challenges globally. Some of these environmental challenges are Global Warming, Water Pollution, Natural Resource Depletion, and Loss of biodiversity (Conserve energy future, 2022). Many of the problems come from human activity where our way of life damages the natural habitats around us. Our everyday life pollutes and ends in the sea, lands, and even the air. This causes damage to the earth's ecosystem, and humanity is forced to find alternative ways of living and using materials to help prevent more damage.

In the battle with some of the environmental challenges, most of the world's countries agreed to immerse the world's total carbon emissions by 60% by the end of 2050 in the Paris agreement (Klima-, Energi- og Forsygningsministeriet, 2020). One of the bigger "sinners" in the carbon emission is the building industry, with 40% of the Danish yearly emission (Nielsen, 2020). Therefore it makes sense to look at how to reuse materials and thereby estimate spare between 60-90 % of the CO2 new materials would have emitted (VCOB, 2021). Architects and engineers have a responsibility to research and use this technology together with manufacturers to help lower the emission from the building industry.

Since the oil crisis in the 1970s, Denmark has worked on researching alternative energy production methods and thereby become one of the leading countries in clean energy (Energistyrelsen, 2022). The Danish tourism industry benefits from this and even creates a genre of sustainable tourists (VisitDenmark, 2019b) that come to Denmark to learn about and experience clean energy production.

The motivation behind the project is to build something that can help the outskirts of Denmark while both being socially and environmentally sustainable and also creating an attraction for the area. The hotel shall transform an existing industrial building into a new sustainable hotel with restored nature and focus on Samsø and its local food. This combination can attract many different types of tourists to the island.

1.2 Vision

The vision is to transform an old industrial site into a new activity for the area and work with Samsø's ideal in a physical project and evolve the site's identity of "water edge" and incorporate it into the site.
Transforming the existing building makes the transformation environmentally sustainable, thereby creating less waste. It also helps preserve some of the site's history in the new building. The building needs to be unique for the location and Samsø, binding the hotel to the island by being inspired by the Samsø building customs, which will make the project harmonies and be accepted by the local community.
With the prestige location at the water edge with Samsø's best beach and bay, the building will have activities that can draw people in all year, thereby being a socially sustainable project.

1.3 Problem statement

Sælvig Beach Hotel; How to incorporate social and environmental sustainability with culinary tourism in an coastal area?

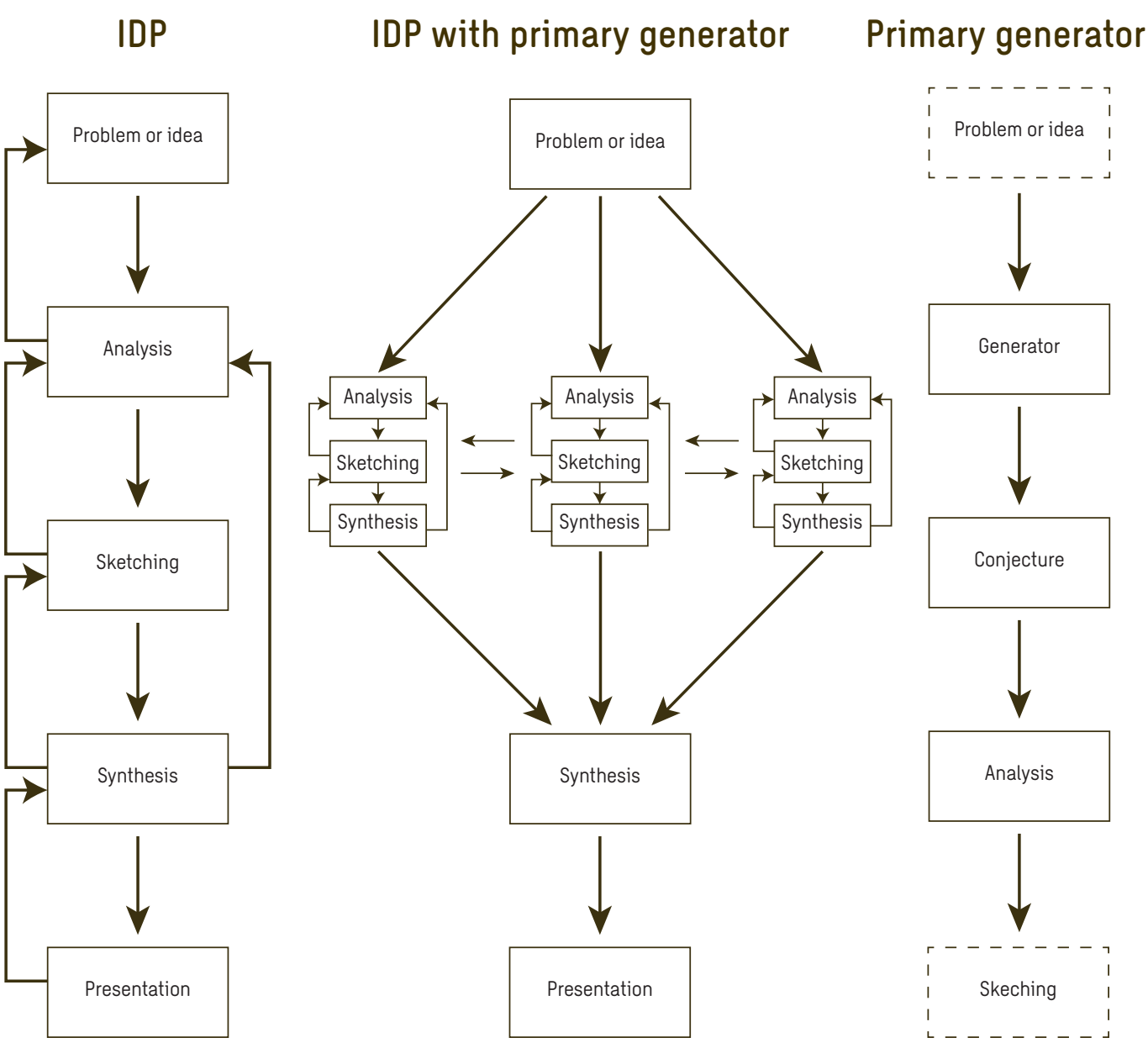
The wish is to create an environmental and social sustainable beach hotel which fit into Samsø ideology as a sustainable island. Which is trying to set the beach hotel apart from other hotels by amplifying different unique experiences in areas as nature, wellness, culinary experience, and history which Samsø has to offer.

1.4 Metode

The execution of designing a building is nowadays a complicated thing and not as straightforward because there are more and more requirements and rules to create a high performing design with great architectural quality. Due to these high demands, it is essential for the design process that the engineer and architect as early as possible collaborate and share knowledge to create the best imaginable building design. Mary Ann Knudstrup wrote in 2003 about the process of merging this collaboration between engineer and architect into what she called the Integrated Design Process (IDP). This process aims to create a holistic approach to a creative process between architectural practice and engineering knowledge. Knudstrup's design process consists of 5 phases: problem, analysis, sketching, synthesis, and presentation. (Knudstrup, 2003) This is an iterative process where it is normal to go back and forth between the phases, which can happen due to new studies or knowledge learned, which influences the design.

The group are used to working with the IDP through the design process, following the phases and going back and forth between them. This has ensured that the next step in the design always was influenced by the newest information and knowledge the group had accumulated. But because IDP can create a large and sometimes a confusing process, the group suggests using Jane Darke's ideas of a primary generator which is a tool to locate key factors or aspects of a problem and use them to investigate and design with and therefore can be able to create some direction in the design process of the project. (Lawson, 2005)

In our methodological approach, we propose working with IDP with the primary generator the group have located three main aspects to work with from the framing of the project. These three aspects that will be used to create direction are Site, Atmosphere and Sustainable. All three will work within a small and more focused way of IDP and iterate with each other only with the key aspect of their process, and then finalised elements from the process will be detailed more before the final design proposal.



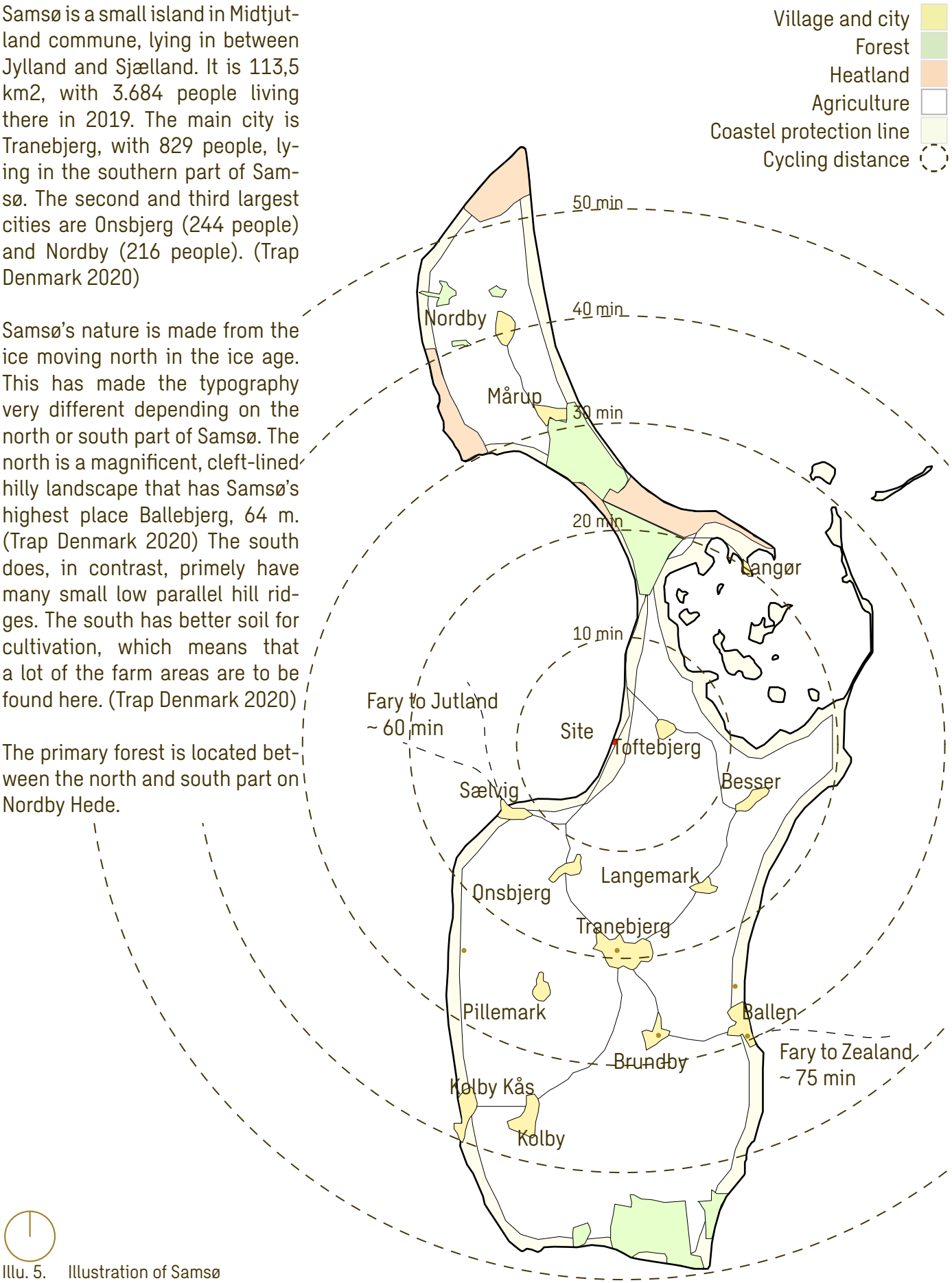
Illu. 4. IDP, Primary generator and the projects way of using the methods

1.5 Samsø

Samsø is a small island in Midtjutland commune, lying in between Jylland and Sjælland. It is 113,5 km2, with 3.684 people living there in 2019. The main city is Tranebjerg, with 829 people, lying in the southern part of Samsø. The second and third largest cities are Onsbjerg (244 people) and Nordby (216 people). (Trap Denmark 2020)

Samsø's nature is made from the ice moving north in the ice age. This has made the typography very different depending on the north or south part of Samsø. The north is a magnificent, cleft-lined hilly landscape that has Samsø's highest place Ballebjerg, 64 m. (Trap Denmark 2020) The south does, in contrast, primely have many small low parallel hill ridges. The south has better soil for cultivation, which means that a lot of the farm areas are to be found here. (Trap Denmark 2020)

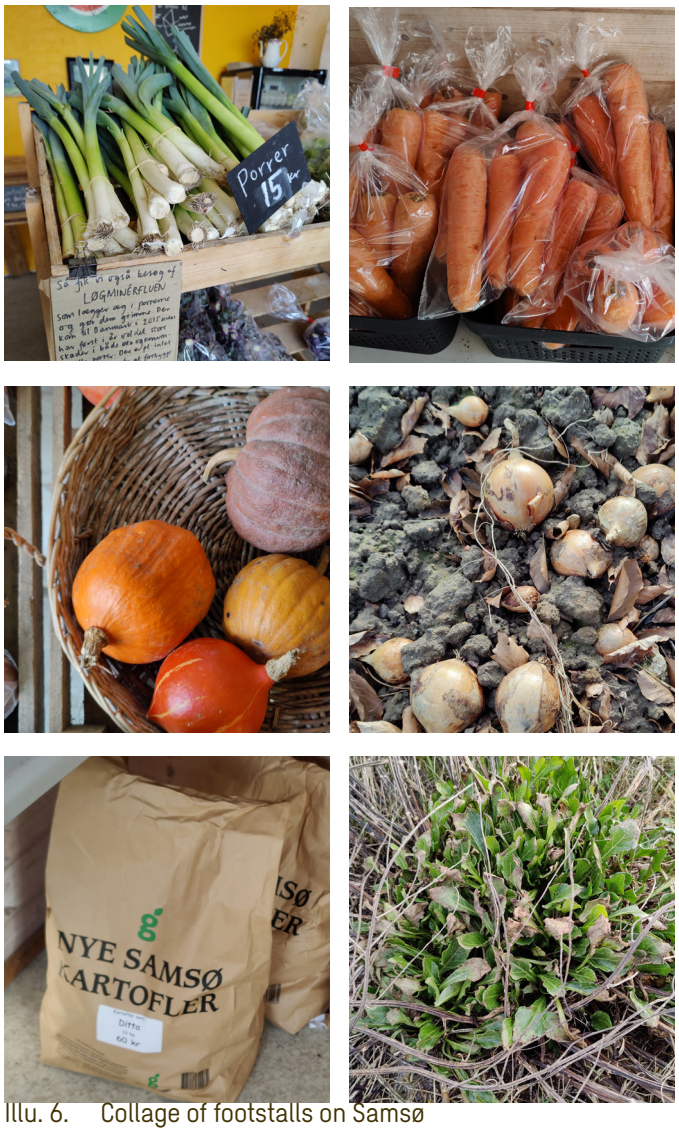
The primary forest is located between the north and south part on Nordby Hede.



Illu. 5. Illustration of Samsø

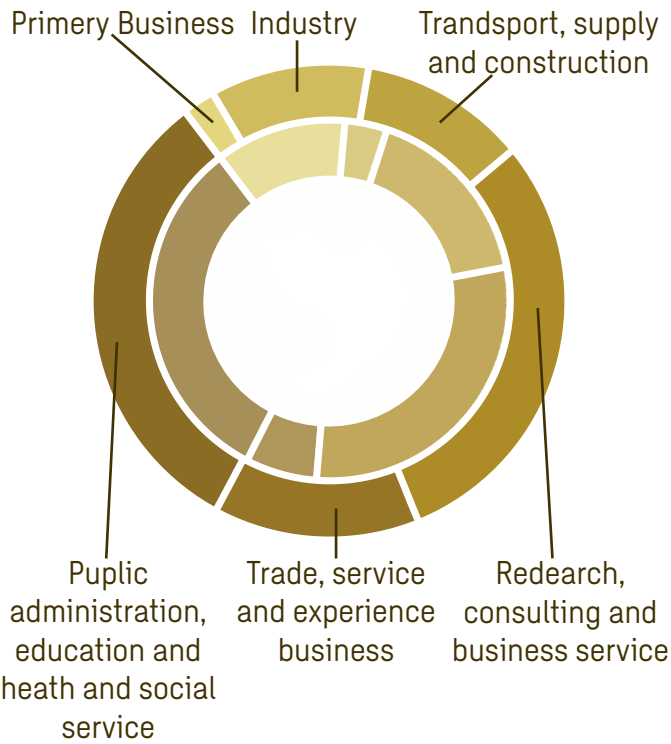
Samsø is being called “Denmark’s pantry”, with 68 % of the land being used for agriculture and horticulture (Trap Denmark 2020, p. 24). The most significant part of residents is also outside the cities, with 65 % in rural districts (Trap Denmark 2020, p. 41). They are most famous for their potatoes, pumpkins, and other vegetables, as well as Samsø Syltefabrik (Samsø pickle factory). Samsø also has many small local food producers that sell to the mainland and at the food stalls along the road.

The two primary occupations that bring money to the island are agricultural industry and tourism (JAaktuelt 2018). Tourism is coming because of the island- and village atmosphere as well as the nature. But two growing factors to draw tourists to the island are the agriculture industry and the status of “renewable energy island”. (JAaktuelt 2018, Trap Danmark 2020)



Illu. 6. Collage of footstalls on Samsø

Inner lighter circle Denmark data, outer circel Samsø data



Illu. 7. Occupation on Samsø

Samsø – CO2 neutral island

Samsø has since 2007 been close to self-sufficient with energy from wind, sun, and biomass. There are still oil burners and petrol and diesel cars, but the wind turbines produce enough energy to sell some to the mainland (Trap Denmark 2020, p. 66). This wish to be self-sufficient comes from the climate summit COP3 in 1997, where the Danish Minister of the Environment and Energy came home with an obligation to limit CO2 emissions. Here Samsø won a competition to show they could be CO2-free and got designated as a renewable energy island (Trap Denmark 2020, p. 66). Samsøs vision is to phase out fossil fuels by 2030 and by 2050, have incorporated a circular approach (Energiakadamiet 2022). They are working with this through the Energiakademiet, which is established to share the island’s experiences at home and abroad and help evolve Samsø as a CO2 neutral island. Many permanent residents make their homes more environmentally friendly with solar cells, sun chimneys, garbage sorting, and new buildings using alternative materials (Trap Denmark 2020).

Samsø building traditions

After the excursion to Samsø, there were visible that Samsø is an old island with many newcomers through the years with new building customs. When cycling through the villages, the different building customs changed drastically. Many had an old farm atmosphere, while in the bigger villages and small cities there were found many different traditions, everything from traditions before the 1850s to much more modern new building customs. As also can be seen from the pictures taken during the excursion.

So, to sum up, the building customs, there are many different ones all entangled between each other. There were houses with straw roofs but equal as many with other roof materials. The same can be said about cladding, a lot was limed wall in different colours, and others were brick, wood or a third material.

Illu. 8. Building customs around Samsø

Site

The site has been chosen from a pre-existing real-life project to build a beach hotel in Sælvig Bay. On the site, there is already an old concrete factory, Sælvig Cementfabrik, that is moving location. Sælvig Cementfabrik is a family own factory that has existed for more than 100 years.
The site and factory are lying just a few meters from the waterfront down to a beautiful sand beach, with the water level being a favourable level for swimming/bathing for all ages. The water and beach have scored "excellent" in the Danish Bathing Water Profile of Sælvig Bay (Samsø Kommune 2015). The site lies in the coastal zone of Samsø.
Samsøs municipal plan says that the coastal zones are not allowed to add more buildings. They also say that the nature in coastal areas should be kept or restored to its natural type; the vision is to support the quality of nature that already exists there. (Samsø Kommune 2021)
The site is centrally located on the island. The road is one of the main roads that connects south and north of Samsø. This makes it easy for tourists to travel from the hotel and see the whole island. The site is close to the ferry to Jylland, which takes an hour, and only 7,5 km to Ballen with the ferry to Sjælland. The site also has many different nature types and nature activities close to it, so both coastal- and nature tourism will have a great stay at the hotel because of the placement.

Since Samsø is a self-sufficient, sustainable island, a more in-depth investigation of sustainability in the building sector and hotels branch will make sense to ensure the hotel fits into the ideology. In continuation of Samsø ideology, a theory about tourism in Denmark, coastal and food tourism and food, in general, are made.

The investigation of Samsø in both history and excursion to the island has given the group a good foundation to investigate further in some areas and a base to design further on. There are key points on the ideology, site and buildings customs, such as material in the area, use of sustainable strategies, and food is important to integrate and restoration of nature.

Illu. 9. Collage of pictures from site

1.5 Samsø

Case study

Samsø Strandhotel

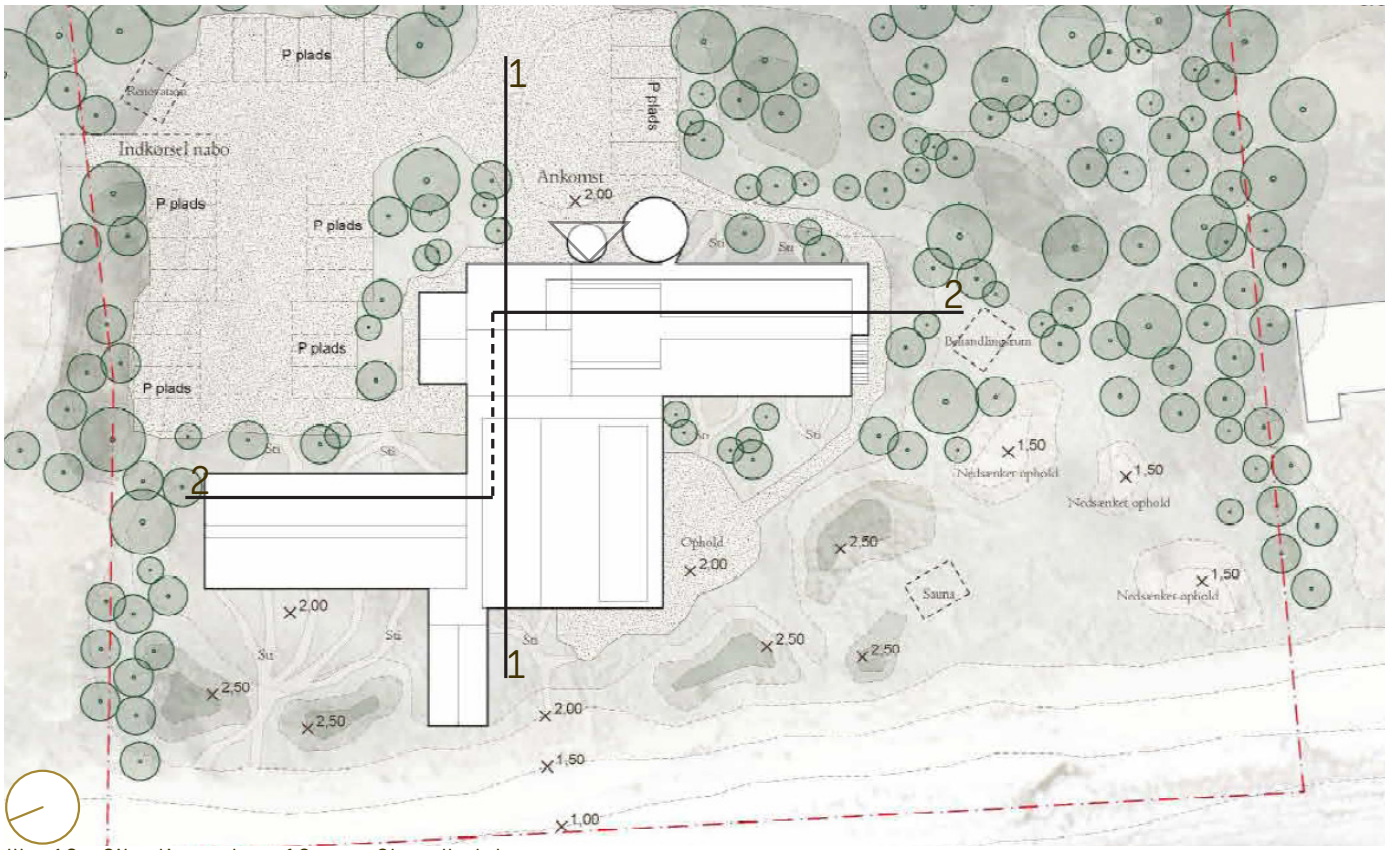
A design proposal for the beach and spa hotel lying on the project's site.
We will investigate LOOP design proposal to get an idea of how they have worked with the site and design of the hotel to see if it could be done differently in both the good and bad ways.

Site:
Havvejen 131, Samsø, 8305 Samsø, Denmark
Architects:
LOOP architects and site plan by SLA
Year: XX

Project Brief

The design proposal was made by LOOP Architects to the "real life" of the developer. The spa and beach hotel LOOP has drawn a stylish couple hotel, where the common rooms are meant to be used most of the day. They have many functions such as a restaurant with bar, a fireplace lounge, lounge facing the water, wine cellar, fitness room, spa and wellness area, and a roof terrace with small, hot spa pools and sun loungers. (Loop, 2021) The design has 27 rooms with terraces, all having a sea view. The rooms are spare with a bed, bathroom, desk and small kitchen and storage. The hotel is a year-round hotel, which gives employment the whole year. In connection with this, the restaurant serves local Samsø-produces food to help the society have income all year.

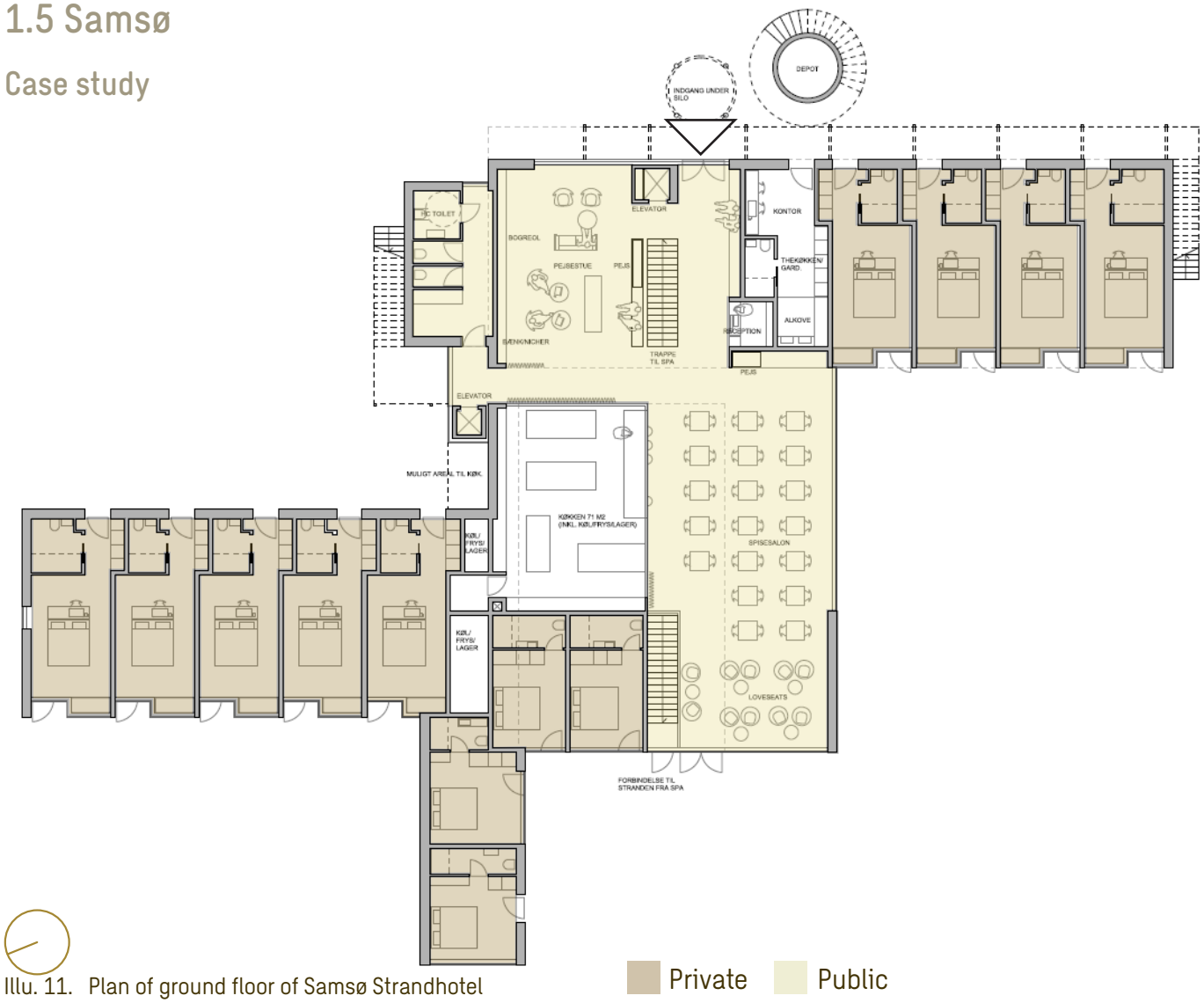
The hotel is two stories high with a basement. The rooms are divided on both ground and one floor, with common rooms in the basement and ground floor. The footprint is a match to the original building on site. The design has restored nature from the "flat plant-less industry site" to a meadow with mixed sauna and hotel facilities, so the site looks natural in the nearby nature, except the building looks out of place.
The building has both the basement and 75 cm façade from the ground being in concrete to resist flooding and have coastal protection, while the rest of the façade is in vertical cedar slats. Inside the materials are white gypsum, wood slats and concrete, differentiated around the hotel.



Illu. 10. Situations plan of Samsø Strandhotel

1.5 Samsø

Case study



Illu. 11. Plan of ground floor of Samsø Strandhotel

Design principal

The Place

The site is very close to the water edge and beach. The near fauna is meadow and pasturage, which SLA has restored around the site while incorporating coastal protection and different hotel facilities. The situation plan is done good, but the design of the actual building stands out from the area. The building is made in light wood, while most surrounding areas have coloured lime plaster buildings. Only the new buildings in the bigger cities are incorporating the vertical wood as the main cladding.

The building is oriented towards the beach, with big open windows, but the rest of the building's facades only have sparse windows to give light into the hotel rooms. This gives a "closed off" and "non-inviting" view from the road.

The Space

The spaces from the east and west sides of the building are very different. The west side has big open windows toward the beach, letting in light and has lots of activity, while the east is more closed and dark with few windows and activities. The difference is significant, and easy to see which way the developer wants the attention to be directed. The two spaces are made of wood materials, but the big windows break the wood up and lighten up the space.

Staging

LOOP and the developer talk about staging food and Samsø, but the visualisations and design proposal do not visualise this. The hotel talks about serving food made from locals around Samsø to help with showcasing the locals and their businesses. The restaurant looks just like an average restaurant.

1.5 Samsø

Case study

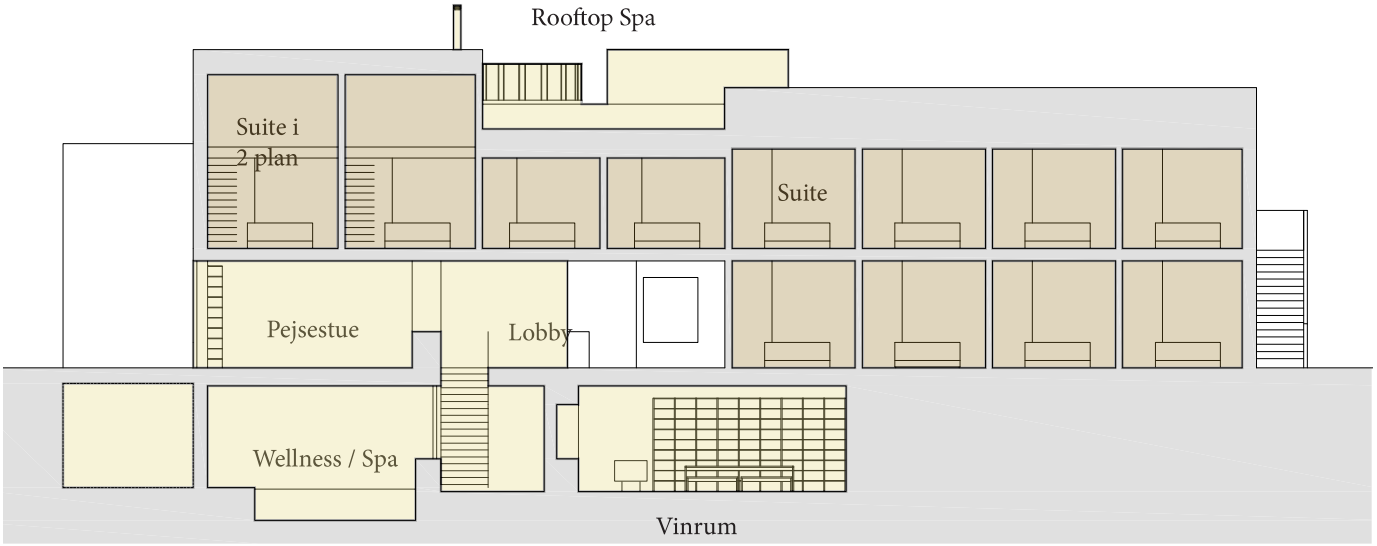
Intersection

There is an intersection between people, between the hotel guest and the outsiders that goes to the restaurant and bar. The developer talks about how the hotel is an exclusive hotel with a spa and the possibility of walking around in one's dressing gown all day. But they also want the locals to use the hotel as their new meeting place when their workday is over. This is conflicting with the atmosphere around the hotel. With the spa being in the basement, and the entrance to that is placed directly in the centre of the hotel with all the local's flow going through. We believe this must inevitably make people feel the need to wear normal clothes, instead of the intended dressing gowns, when meeting the locals after work.

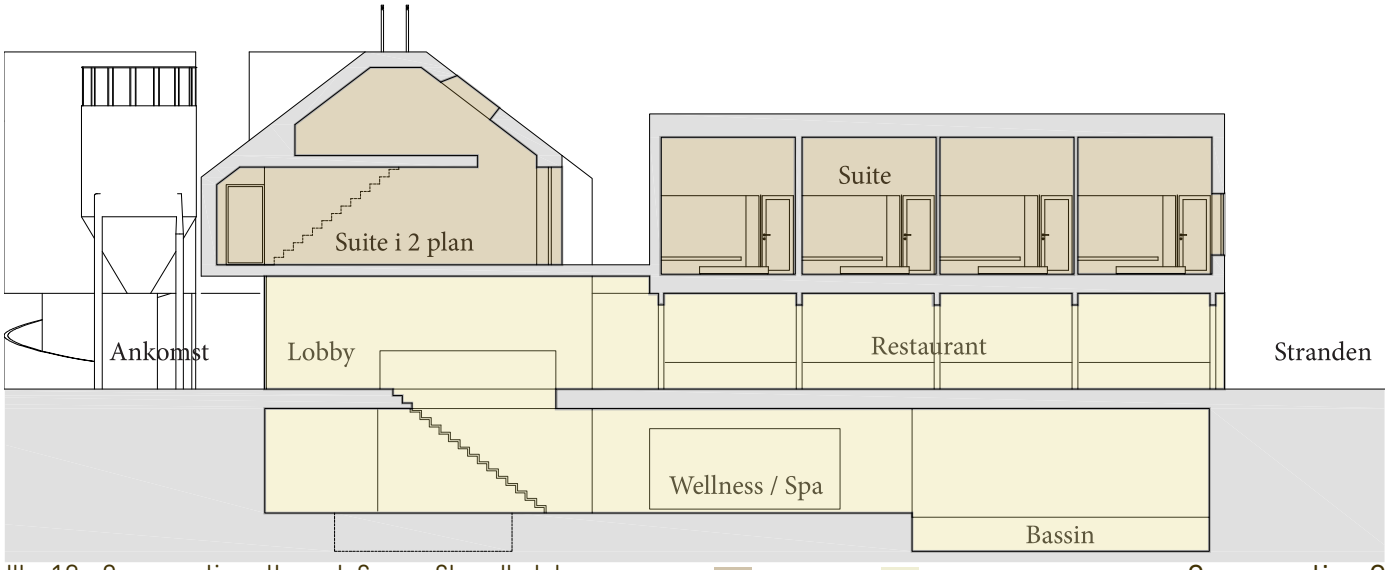
Sustainable tectonic

The building developer does not talk about being sustainable, but they have chosen a timber construction because of its lightness. The choice is subconsciously more sustainable than the alternative, such as concrete in relation to the site history. They use concrete to create the basement and coastal protection in the façade. This is not a good choice to be creating a basement in a coastal zone with changing water levels and sand, but it is an option that is doable.

The existing building will be torn down, and only reuse a few elements around the hotel and the rest of Samsø. The materials they will "save" are not to be reclaimed in their original condition but to be recycled into other projects, often as decorations.



Cross section 1



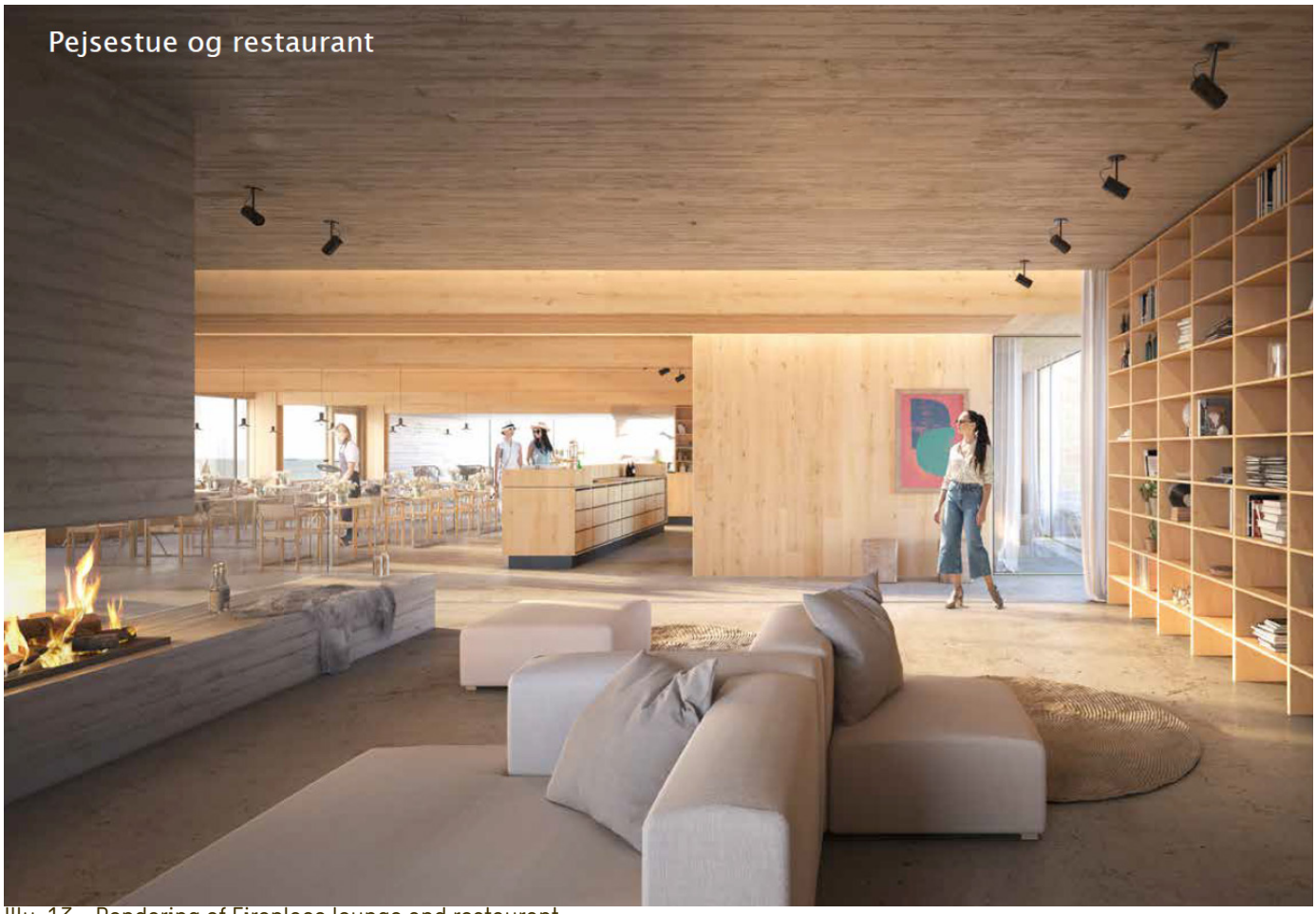
Illu. 12. Cross sections through Samsø Strandhotel

Private Public

Cross section 2

1.5 Samsø

Case study



Illu. 13. Rendering of Fireplace lounge and restaurant

Conclusion

The project LOOP and SLA have made both good and bad design ideas. The way they have worked with the site and near contexts looks good and uses a pleasant way of combining coastal protection, meadow restoration, and different hotel facilities. The west side of the building also makes sense with the big windows toward the beach, but the result of this is a closed-off east side. With the wish to draw people into the building is a bad combination. There need to be some activities out front that draw people in. Maybe even some that have water or nature themes, to which they don't talk about they will do. This could also help with staging the hotel in a more Samsø-atmosphere since so much of Samsø is about nature, water and agriculture.

When they get locals into the building, they have to walk through the building and past the entrance to the spa, so they mix the relaxed atmosphere the spa has with the atmosphere of the restaurant gives. This can scare away some people but might be an easy fix to ensure the separation of the two activities or have time zones where the different atmosphere "exists".

The idea of using wood construction is smart in relation to the heritage of the site, the existing have that all over, but it is also a more sustainable option

1.6 Sustainable

Sustainability and strategies

The newer understanding of sustainability is based on the "Report of the World Commission on Environment and Development: Our Common Future", 1987, that state that:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

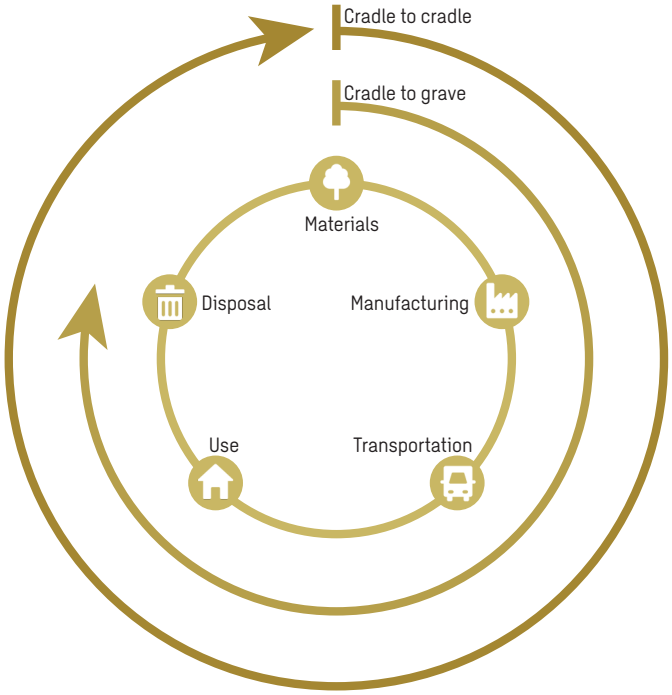
- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given;

- and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."

(World Commission on Environment and Development 1987, p. 41).

That, in essence, means don't use more materials than that can regrow or be reproduced and therefore be of use for the future and future generations.

This is a very general understanding. In David Bergman's book "Sustainable design, a critical guide", the book zooms into sustainability in the building sector by looking at the materials and houses, Life Cycle Analysis. Here is the cycle cradle-to-grave described as a way of looking at products in their raw form, to manipulation in production before being used, and eventually the end of its life. But it doesn't go in a cycle, so the term cradle-to-cradle makes more sense. It is the same process but begins again with the product being reused instead of going to its "grave". Our garbage "*... must become an input for another use*" (Bergman 2012), so it is a whole cycle. Nowadays, a way to check on this is by looking at the product's Life Cycle Assessment (LCA), which looks at the entire cycle in relation to different input and output of energy and environmental impact. The LCA quantify all of these inputs and then come up with values to represent their impact.



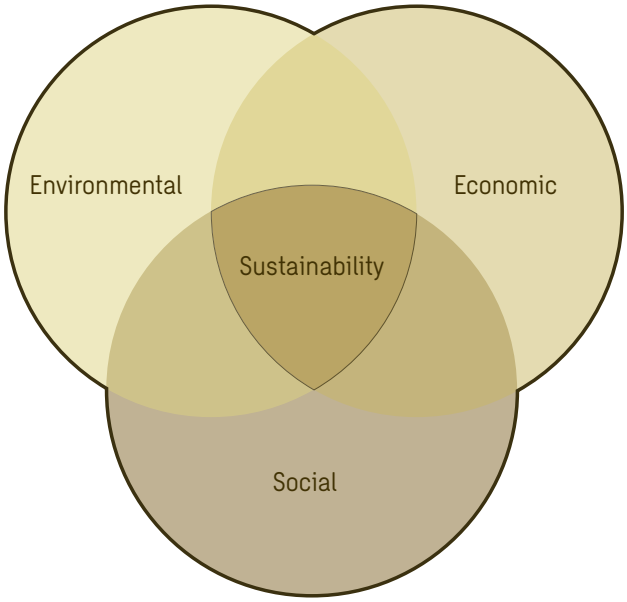
Illu. 14. Illustration of Cradle-to-grave and Cradle-to-cradle

David Bergman then leads over to talk about more than the environmental impact of buildings. He writes that "*True sustainability, though, requires us to broaden our definitions to include aspects of how we live*" (Bergman 2012) which he then compared to the theory of "the three bottom lines" mentioned by John Elkington (1999) as dividing sustainability into three parts; environmental, social and economic sustainability. The theory is fundamentally about ensuring that our actions today do not diminish the degree of economic, environmental and social opportunities for future generations (Elkingtons 1999 in Nygaard Larsen, 2016), which is similar to Our Common Future, though more accurate since having three branches.

1.6 Sustainable

Strategies and reuse

Environmental sustainability is about using renewable and non-renewable resources. Social sustainability is about increasing overall welfare for the community, securing society, and creating educational opportunities. Lastly, economic sustainability is basically about making a profit. It is an inventory of earnings and expenses as one knows it from companies (Elkingtons 1999 in Nygaard Larsen, 2016).



Illu. 15. The three bottom lines illustration

A tool to work with sustainability in the building sector is through different strategies. These could be passive and active strategies. They both work to increase the energy efficiency of the building. Passive strategies are simpler, usually non-mechanical techniques, whereas active strategies tend to be involved more advanced technologies (Bergman 2012).

Passive strategies could include thermal mass, solar orientation, insulation, ventilation, windows, glazing, and more (Bergman 2012). Active strategies could be solar thermal collectors, photovoltaics, mechanical systems, hot-water efficiency, lighting controls, and daylighting, to name a few (Bergman 2012). Relevant passive and active strategies will be discussed later in the report when relevant to the design process.
One of the other many ways to look at sustainability is through the materials used in the building. There are options such as; dematerialisation, reclaimed materials, recycled materials and renewable materials, but also a newer phenomenon of biogene materials.

Dematerialisation is the least sustainable since here, the whole structure will be removed, and no materials will be salvaged. Reclaimed materials are where materials are used again without any modification and lowering their "value" and possibility to be reused. On the other hand, recycled materials have undergone a transformation to be reused again, like concrete being crushed to be used in roads. Renewable materials can be regrown in less than one generation and thereby be of use for many generations to come, in relation to "Our Common Future", are these materials what they talk about. Lastly, there are biogen materials that are resources that are renewable and can be grown and harvested annually from the same area (build, 2022). This has Build and Realdania looked into how the building sector affects if these are used in contrast to standard materials (Build, 2022).

The term sustainable will be looked at through environmental and social sustainability. There will be looked at the building's environmental impact, both how the building is to be in, but also its materials choices and their impacts. LCA on materials will be performed to aim after low-impact materials. There is a wish to mainly use passive strategies for the design since the placement is on Samsø and their ideology. The design will also consider reclaiming the existing building into the new hotel and reusing as many of the materials as possible.

1.7 Gastronomy tourism

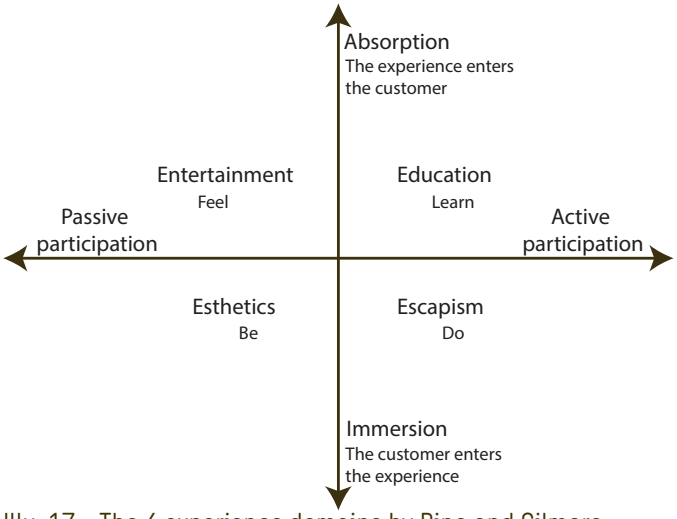
Danish tourism and experience economy

Before creating a beach hotel on Samsø, Denmark, it is essential to understand what the Danish tourism industry is? What is it that makes Denmark interesting for people to spend their vacation exploring everything from the large historical sites and cities to the Danish coastline and the open landscape with fields and forests? Based on Samsø, Denmark's pantry and climate-friendly island, can it have an influence the type of tourism that comes to the site? And with what purpose do they come to visit the island?

Over the last seven years, before Covid-19 put the world into a global pandemic, the Danish tourism industry grew slowly and steadily from when it was at its lowest in 2014 (Vækstteamet, 2013). The growth has created employment and overall welfare throughout Denmark, but how did that happen? Back in 2014, the Danish government asked the Growth Team for Danish Tourism for recommendations on how to create growth in Denmark. Back then, the answer was experience economy and focus on ambitious investment in sources that generate growth within the high season of tourism in Denmark (Vækstteamet, 2013). Now in 2022, with the covid-19 pandemic almost over in Denmark, the question is then, after two years with a lot of things closed and a decline in tourism all over (VisitDenmark, 2021 a), is it then to continue the recommendations from 2014 or develop a new strategy for tourism in Denmark.

Illu. 16. Atmospheric picture of sustainable tourism

There are many ways of using Experience economy to create growth. One of them is what Pine and Gilmore talk about, the experience can be divided into 3 phases a before, during and after the experience. The before phase is about planning and building expectations for what is to come based on one's own previous experiences and the experiences of others, as well as the experiences of companies. The during phase is the experience itself, where the experience consists of two dimensions which create four experience domains (Madsen, 2010).



Illu. 17. The 4 experience domains by Pine and Gilmore

According to Pine and Gilmore, the four domains are based on how much a person participates and experiences the experience, which creates a completely different experience for different persons. The four experiences are entertainment, learning, aesthetics or escapism experience. You cannot perceive an experience as one because it is often experienced as a more comprehensive experience. One can, therefore, easily move around in several domains when experiencing.

The after phase is when the experience is over, and there only are the memories back for the experience. The after phase is important for a company to retain customers and create loyalty. A good memory also gives a greater chance that customer would come again and also share their experience with others. Therefore, business opportunities are not ending just because customers have checked out (Madsen, 2010) So working with what Pine and Gilmore appose to experience economy, it is important to understand what kind of experience has been offered and how people may experience it and, therefore, if there may be a target group for the experience.

1.7 Gastronomy tourism

Danish tourism

According to VisitDenmark, the national tourism organisation in Denmark, they can see from different studies made over the years that there before Covid-19 were three main targeted tourist groups in Denmark. The nature and coastal tourism, metropolitan tourism and business tourism (VisitDenmark, 2021 a). Out of the three types, there will be more focus on coastal and nature tourists due to the site's location. The main purpose of nature and coastal tourists is to relax and enjoy nature which usually passes by walking or cycling at the beach or in nature as hiking and mountain biking. Still, they can also take on day trips to historical attractions, amusement parks, and more. (VisitDenmark, 2019)

In addition to the three groups, VisitDenmark has worked with and developed strategies for new types of tourism during the last few years, which are the sustainable tourist and the gastronomic tourist. Sustainable tourism is about making Danish tourism greener with regard to the economic, social and environmental and, thereby, shifting the focus away from promoting tourism in high season and instead of sharing it throughout the year (VisitDenmark, 2021 b).
For gastronomy tourists, food and gastronomy are a big part of the holiday experience, in that the food helps to convey the Danish culture and nature. For gastronomy tourists, specific to the coast and nature holidays, come to experience the local atmosphere around Denmark when they visit the local smokehouses by the coast or farm shops in the countryside or enjoy a local island speciality (VisitDenmark, 2018).

To achieve the best possible gastronomic experience for the gastronomy tourist, sensory involvement is an important element because adding a sensory stimulation to an experience engages the customer. The more an experience involves the senses and the more senses that are involved, the more memorable it will be because people use their senses to understand, orient themself and communicate with their surroundings (Madsen, 2010).

The tourist industry on Samsø grows every year; in 2015, Samsø had 244,405 guests, and by 2020 that number had increased by almost 40 % in just six years (Samsø Kommune, 2021). For Samsø, one of the biggest tourist groups is nature and coastal and gastro tourists. This is with good reason because Samsø, besides its unique nature and small villages which is optimal for cycling tourism, has more than 1,500 annually events, of which many of them are considered "Reasons to go", such as music festivals, gastronomic experiences, exercise races and tournaments (VisitDenmark, 2022). What makes Samsø interesting truly is food production on the island because Samsø is known to be the whole of Denmark's pantry, where when travelling around the island, it is easy to spot all the fields with different vegetables on them and all the small food stalls just close by the field selling the in-season vegetables.

Illu. 18. Atmospheric picture of Balden Havn

Illu. 19. Atmospheric picture of footstall

1.7 Gastronomy tourism

Samsø tourisme and Food architecture

In the book Mad + Arkitektur, Professor Karen A Franck talks about how food is all around us. By this, she means that food-related activities can take place anywhere in a built environment, both indoors and outdoors, in different sizes and shapes - it's all just about location. As described in the text Edible Urbanism by Gabrielle Esperdy in the same book, by taking a food market and putting it into a building and thereby merging the two things, she believes that it does not only provide quality to products and a special selection of products for the consumer but also promises the quality of the area, which benefits both the farmers, the consumers and the restaurants, that increases the viability and vitality of the city life. Thereby, a particular place like a food market, for example, can also help to create what Karen A Franck calls a third place between home and work where one would be able to come and relax, socialise and discuss different opinions in a public space and create a kind of communities there. (Franck, 2005)

Conclusion

Even though the project site is not in a city but in the countryside, one can still use displayed elements like Karen A Frank, and Gabrielle Esperdy talk about in food and architecture. Samsø is a small island community, and there is not far between many of the things, so this community has created its own unity. If you take the idea of a food market that in the city is located in one place and spread it all over the island, you can imply the same mentality. Thereby it takes the consumption even closer to where the food is produced, and because of this also creates a unique opportunity to create a third place for both tourists and locals to showcase all these special products. This encourages the tourist to go out and learn more about where these products come from at the local food stalls around the whole island. In addition to showcasing Samsø food market,

It is also important that this third place appeals to several types of tourists like nature and coast, who come to relax and enjoy nature, or gastro tourists, that come to experience the local atmosphere and taste nature. The third place and gathering point on Samsø make the most sense to create in the landscape to best showcase Samsø's best qualities across the seasons, instead of in the middle of a city.

Illu. 20. Small local grocery store that also served as the third meeting place for the locals

Illu. 21. Food production on fields

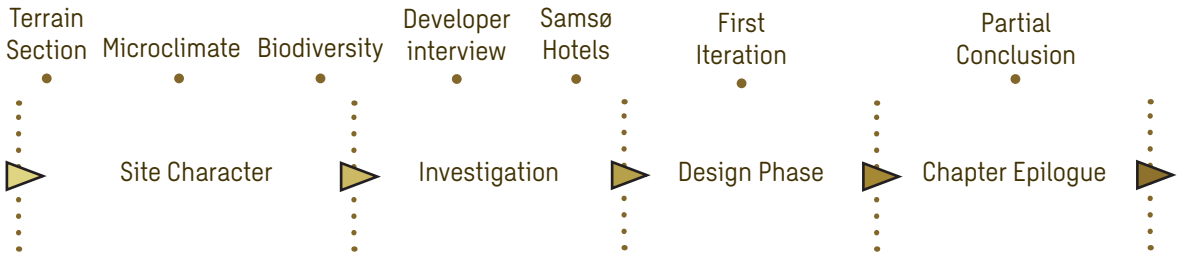
1.8 Partial conclusion

Through this chapter, the understanding of the group's motivation and the vision for the project was explored. The exploration of Samsø through books, trips and case studies has given an understanding of the atmosphere of the context and the local people for which the hotel needs to fit into. The case study of another design idea by Loop Architect for the site has given an understanding of both positive and negative things to take into consideration for the design.
The two framing texts have given the group an understanding of sustainability and what cliental the hotel should cater to. The group will work toward having environmental and social sustainability incorporated into the project along with passive strategies and alternative materials. The cliental should be nature and coastal tourism and gastronomy tourism since it fits with the ideology of what was learned in the study of Samsø. It also helps give the hotel an experience more than "just" being an accommodation.
The generators were found to be the Site, Staging and Sustainability. These will be analysed and designed from in the following chapters.

Illu. 22. Atmospheric picture of Sælvig Concrete factory

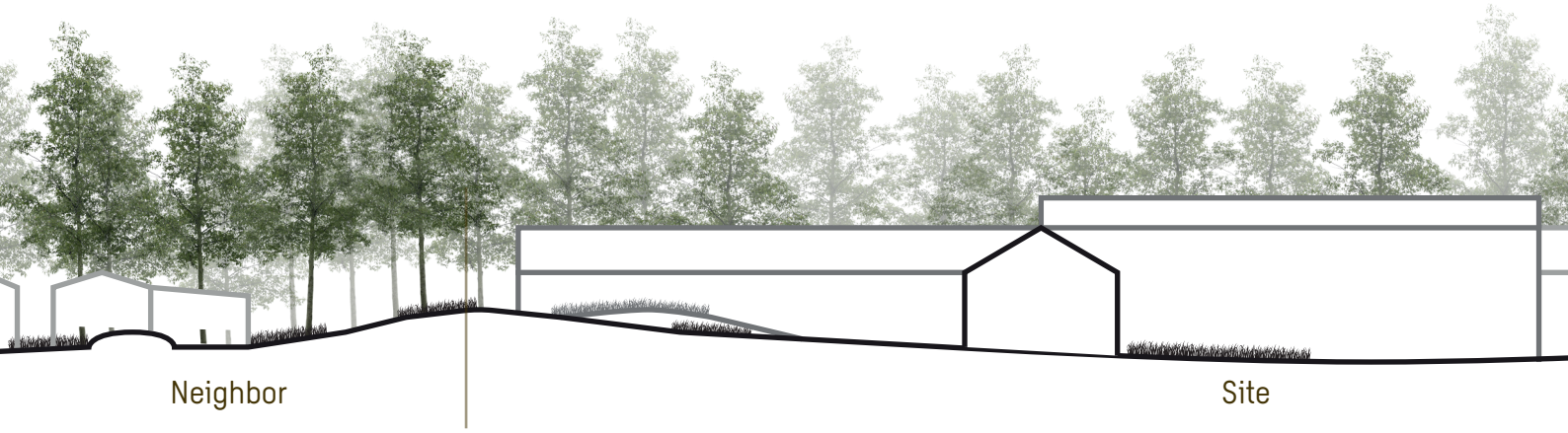
2.0 Projekt site

In this chapter generator to “understand the site” will be analysed to understand the site’s characteristics and the vision from the developers. The other hotels on Samsø are investigated to help understand the size and guest capacity there can take. With all this information in mind, the first sketches and ideas will be drawn and discussed in the group to develop further ideas.

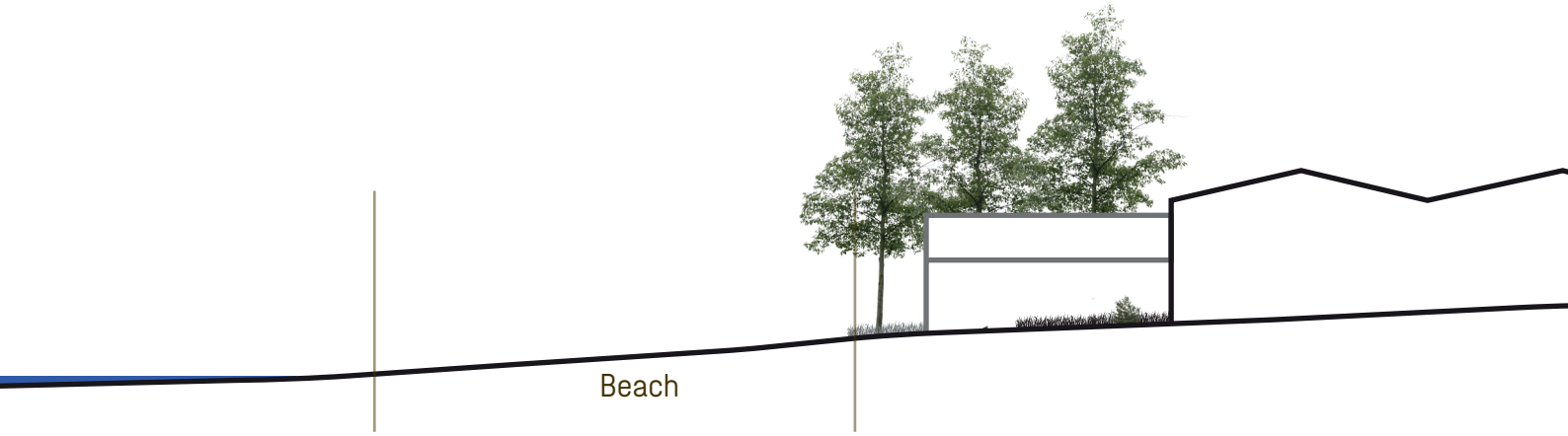


2.1 Terrain section of site

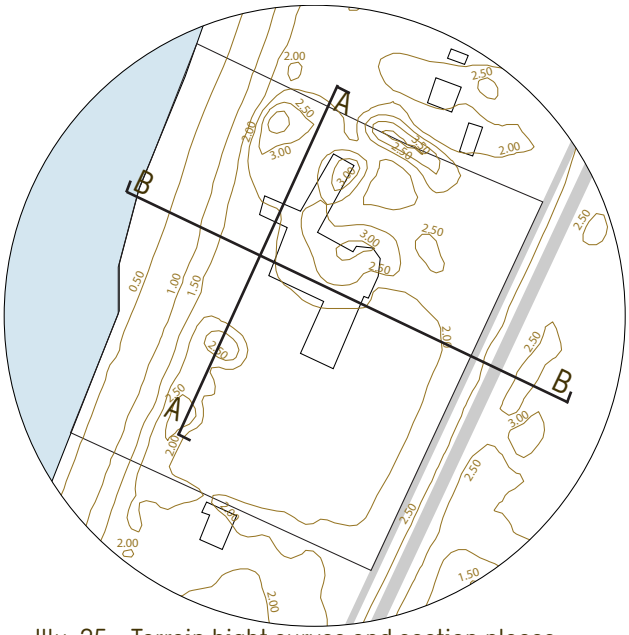
Cross-section through the site is made to give an understanding of the terrain on the site. As can be seen on the cross-sections, the site is primarily flat with only a few elevation changes. There are a few more elevations outside the site because of natural coastal protection, as seen in AA-section. This gives help to further down the design process of the need to restore the landscape to a more coastal atmosphere compared to the now very industrial.



Illu. 23. Cross section AA through site



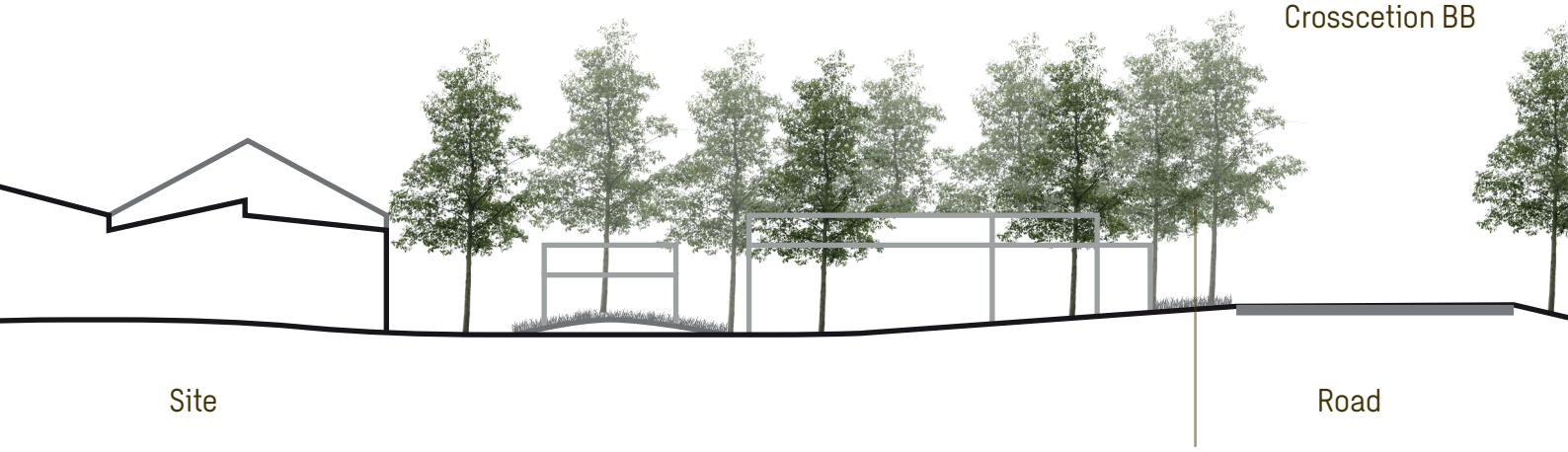
Illu. 24. Cross section BB through site



Illu. 25. Terrain hight curves and section places

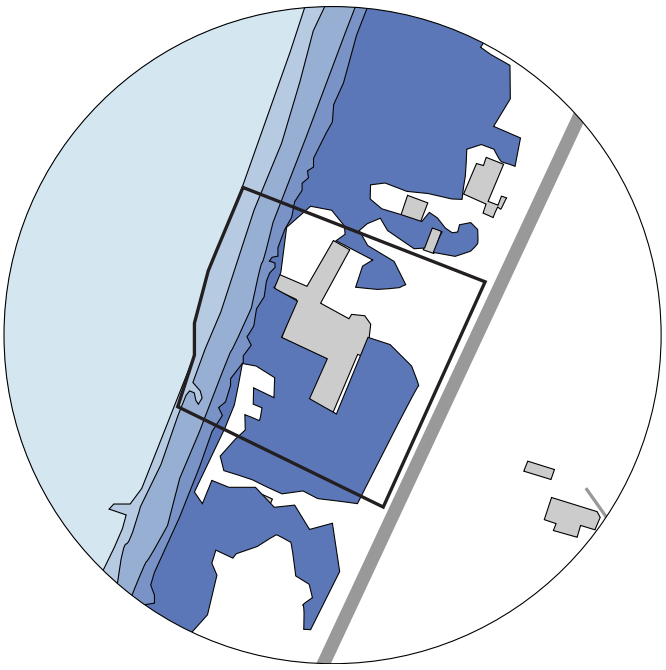
Crosscetion AA

Crosscetion BB



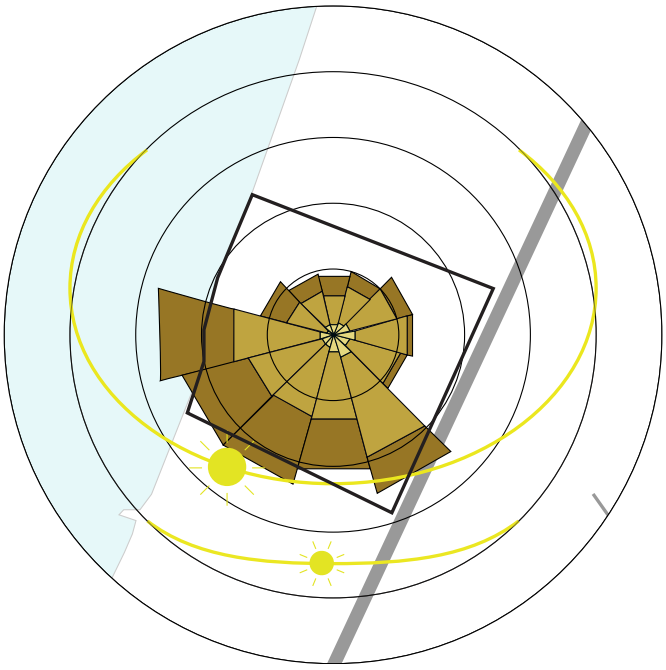
2.2 Microclimate

The local area's microclimate is looked at to ensure the knowledge of where the wind will come from and how the sun will hit the site.
This is important so that the design can take the precautions on the microclimate to ensure the design doesn't have gener for the guest when using the outdoor areas. The microclimate is also important in ensuring the design's optimal use of passive strategies since many strategies use the microclimate to function.



Illu. 26. Water height over normal

0 m 0,5 m 1 m 1,5 m 2 m



Illu. 27. Sun and wind

0.2-5.0 m/s 5.0-11.0 m/s > 11.0 m/s

2.3 Biodiversity

There is a demand in the Municipality plan to restore the site back to a more relevant nature type compared to the local area around the site. Therefore, to ensure easy restoration, there are looked into the areas around, and what typical flora and fauna are to be found.

As shown in the illustration, the nearest habitat type is pasturage and salt meadows.

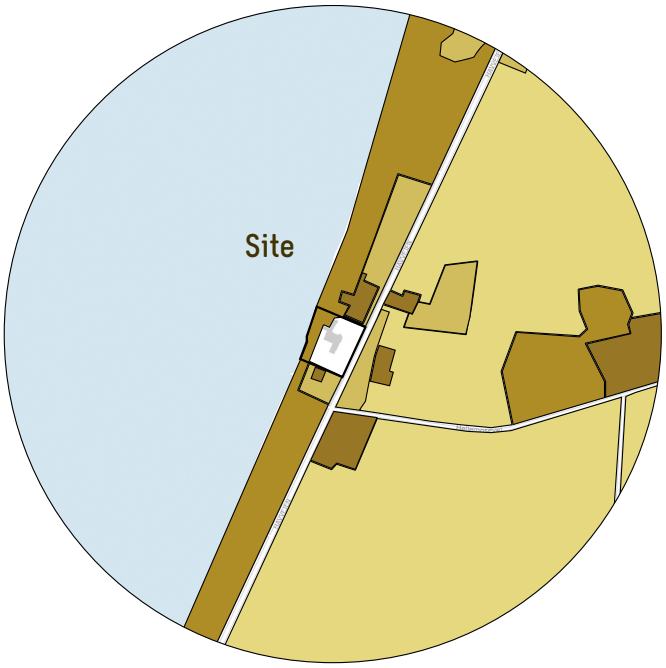
Pasturage is dry, open areas that often have a rich and varied herbaceous vegetation with many rare species. The area has predominantly been used as grazing land. In addition to the low-growing vegetation, there can often be found grazing-tolerant shrubs and trees. Pasturage also has a great significance in wildlife, in being a habitat for many endangered and vulnerable species (Miljøministeriet 2022). A great pasturage through attendance should have:

" - Flowering plants in the summer for the benefit of herbivorous and nectar-seeking insects.
- Make vegetation in the winter for the benefit of mosses and fungi.
- Space for native shrubs and trees.
- Fresh excrement from the grazing animals throughout the season for the benefit of manure beetles and fungi.
- Stains with bare appeared soil, which short-lived and uncompetitive plants, lichens and mosses can colonise." (Miljøministeriet 2022, translated)

Salt meadows are close to pasturage but are coastal, low-lying, and saline affected areas with vegetational cover. The vegetation consists of salt- and moisture-tolerant grasses, reeds and herbs that form a more or less cohesive plant cover. The meadow includes different vegetation types depending on the salinity of the water, the frequency of floods, the impact of fresh water and agricultural utilisation. Salt meadows are often used as grazing areas for farm animals that are the primary attendance the area gets. (Miljøministeriet 2022)

Around the site, there are also fields for agriculture, forest, private gardens and meadows with lakes.

Illu. 28. Collage of flora and fauna around site



Illu. 29. Map showing placement of flora and fauna

2.4 Developer interview

To better understand the thoughts behind the beach hotel, an interview has been done with the developers behind the project, Lasse Kronholm trained as a city planner and outdoor supervisor and Sille Jensen, trained in behavioural psychology and communication.

Based on interviews with Lasse and Sille, various themes have been observed for the process the project has gone through, and the most relevant themes have been selected and summarised for this project.

Hotel

The project has been underway for many years now. It all started with a delivery of concrete back in 2007 and then a talk back and forth between Lasse and cement manufacturer Bjørn. As the years went by, interest grew, and ideas started blossoming. Lasse and Sille fells the idea of a hotel is doable since, in high seasons, this area is not crowded, but the demand for good accommodation is growing and always in shortage. In addition, Samsø beach hotel is set to be a year-round hotel to make the hotel more than a place to spend the night. Whereas most other types of beach hotels usually only work during the summer seasons.

Based on Lasse and Sille's study, they say that by having a beach hotel, there would be activities in the summer. By adding the spa / wellness facility, it would also be possible to create activities in the winter. With activities all year round, it helps to create better permanent jobs at the hotel and create permanent revenue for the hotel and for local businesses that would have a delivery contract with the hotel, so they do not only have to depend on income in the high season. Lasse and Sille talk about creating a place where there is room for locals and hotel guests to meet each other and get to know new people.

The primary customer group, in addition to local guests, are couples, friends and perhaps smaller companies both from the rest of Denmark and abroad. There should be no problem selling the opportunity to wake up with their feet in the water and relax in robes all day with their location.

Illu. 30. Interview with Lasse and Sille

Illu. 31. Picture from old industrial hall

Illu. 32. Picture from inside the westernmost building

Illu. 33. Pictures from the westernmost building

Illu. 34. Picture of the current coastal protection of building

Design process

For the actual design of the hotel, there have been various things that one should keep track of. They tell about what requirements and the process they have been through with their design of the beach hotel. To start the design of the hotel, one of the most important things is to first have to change the plot function so that a hotel can be run there. Another thing is to make sure to keep the roof shape and footprint, but it can be approved for small changes in volume, and you must be able to be saved from fire with a ladder all over.

With the location of the sites down to the water, there are problems in relation to the risk of flooding of the site, especially when winter storms happen. So, it is crucial to build the walls to withstand the water without destroying the structure and establishing shutters for openings in the wall. Therefore it is also important to control and collect water on the site, says Lasse and Sille. In addition to water challenges, there is also to consider light pollution from the hotel, since the place have opportunities to see the night sky.

In terms of sustainability, Lasse and Sille do not work after having the hotel a certain certification that could have a big impact on the design, but instead, make the green choices that may in the future lead to different certifications if they want it. By making those choices, they then believe that there is more opportunity to work with the cool detail in the design instead of saving in the design. Some of the sustainable choices they talk about are reusing the old wooden beams and boards to create different moods and bring some history into the design and the materials they would not reuse for the designer, thinking they might be able to be used for other projects on Samsø.
With choices and the thoughtfulness of the details, Lasse and Sille want to make sure that there is a common thread through it all, from materials to furniture and that the whole thing is strong-wear and easy to keep clean.

2.5 Samsø hotel investigation

To understand the context that the hotel must fit in, the other hotels on Samsø have been investigated. As can be seen in illustration 35, the room count is very different, with space from between 10 to 46 guests in the main building. They all have primarily open in peak season when the amount of tourists on Samsø is highest. With this, the design can adapt the room number to fit the demand on Samsø and not be out of size for the island.

	Rooms in main building	Rooms in total	Floor amount in main building	Possible guest in main building	Possible guest in total	Month open of a year
Ballen Badehotel	18	32	2,5	36	64	5 month
Brundby Rockhotel	19	23	2,5	38	46	10 month
Strandlyst hotel	5	10	2	10	20	6 month
Flinchs Hotel	23	30	2,5	46	60	7 month
Ilse marie Badehotel	13	22	2	26	44	9 month

Illu. 35. Diagram of Samsø hotels capacity, floors, and opening time

Illu. 36. Collage of pictures of some hotels on Samsø

2.6 Design phase 1

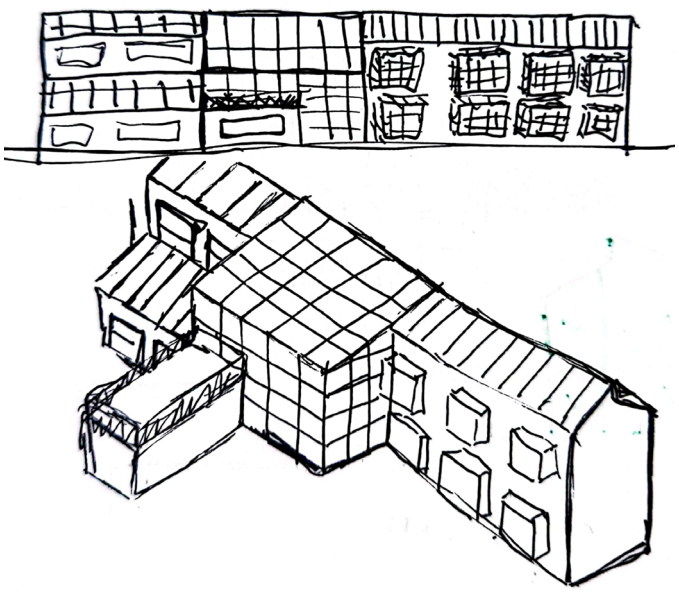
First iteration

The design process started with gathering a lot of information, as seen in the above, to better understand the site, Samsø and what parameters the design should be considered.

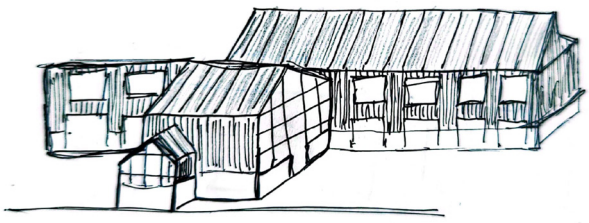
With all the information, the design process started slowly by looking at the building's shape and size and mainly operated out of the wish to expand vertically to follow the coastal zone law.

There were drawn about having an orangery building on the site over the restaurant part toward the sea, but this was dropped both because of it not relating to the site. The change of it also overheating since it was pointed toward the south-west was something that made the excitement of the orangery change.

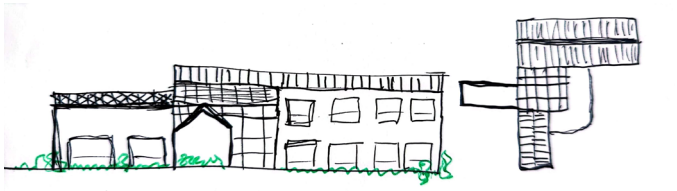
An idea of a smaller building being made in glass panels was examined. The important part was the water view, which all the building openings were located towards.



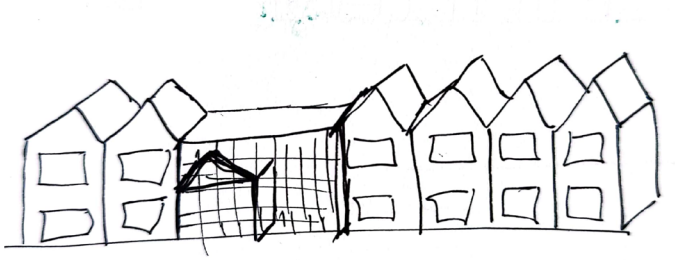
Illu. 37. Isometry and façade idea with main building as atrium



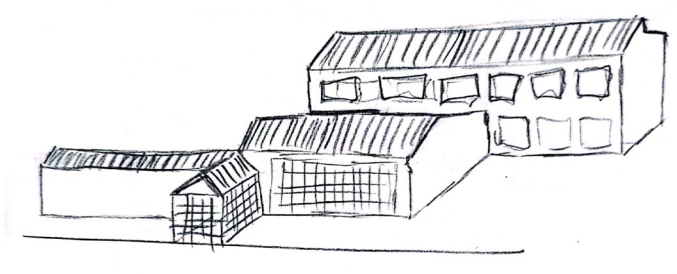
Illu. 38. Drawing of idea with glass façade of main building



Illu. 39. Iteration of earlier ideas



Illu. 40. Atrium attempt with side building new roof slope



Illu. 41. Main building with glass facades and first floor

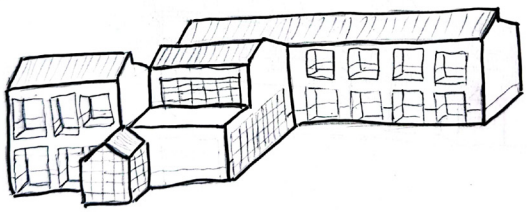
2.6 Design phase 1

First iteration with function

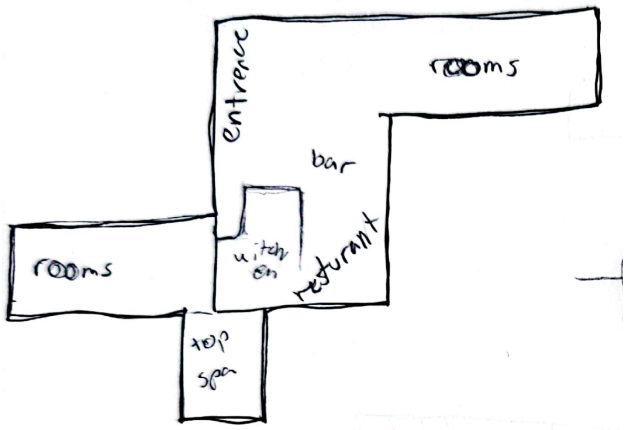
With a shape that made sense, though high to the context, functions were looked at—both in placement and how the functions would affect the shape of the building. There was talk about the need for a basement, so it was looked at together with what functions would make sense to place there.

There were investigated openings in the building with a restaurant on either ground or first floor. The placement of hotel rooms and how they affected openings and terraces in the building façade was also investigated.

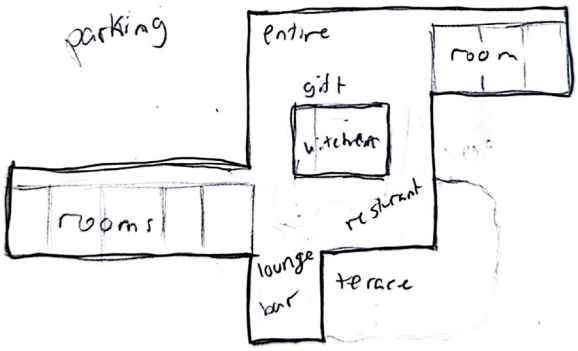
After this, the need to find out the sizes of the functions, as well as inspiration to design and how to stage the functions.



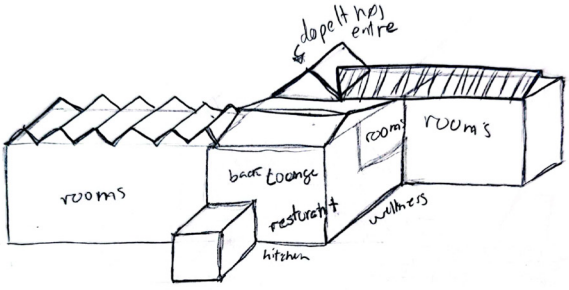
Illu. 45. Drawing of idea of façade look



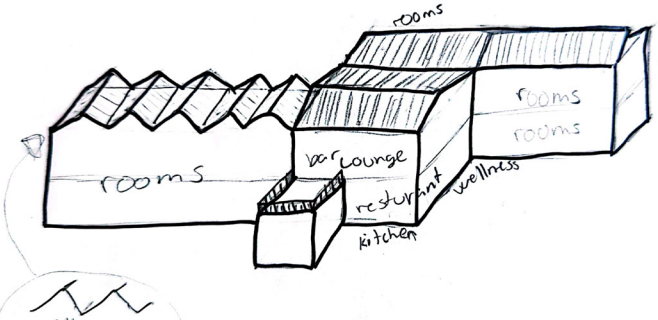
Illu. 42. First idea of functions into building shape



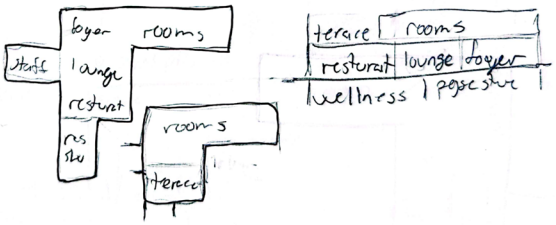
Illu. 46. Plan of functions with kitchen as centre



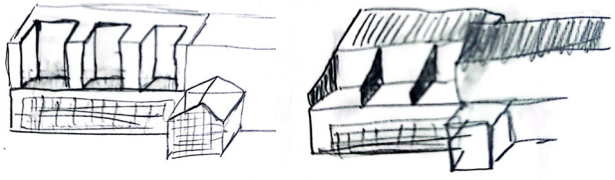
Illu. 43. Functions into 3D form of building



Illu. 47. Functions into 3D form of building 2



Illu. 44. Functions into plan and section



Illu. 48. Terrace openings in roof investigation

2.7 Partial conclusion

Through this chapter, an understanding of the microclimate and biodiversity of the site was gained. This has given knowledge of how to work with the site and the problematic elements the project needs to work around, such as flooding and flora. The understanding of the others hotel on Samsø, with capacitate and openings hour, gives a sense of how big an average hotel is and how long their season is, which can be used to make sure the hotel can keep up with the demand for accommodation options Samsø have. The developer was interviewed, which gave an idea of the drives behind the project and what kind of clientele the hotel will be able to attract. This gave many ideas for the design process that first was drawn with no presumption. With the analysis as a generator, a more realistic design proposal was worked with, and functions discussed with the developer were incorporated and influenced building shape. More information on functions and staging of these was needed to continue.

Illu. 49. Atmospheric picture of bench on beach

3.0 Atmosphere

In this chapter, the generator “Atmosphere” was worked with. This will be done through case studies of Svinkløv Badehotel and Noma 2.0, which both work with staging, one of the historical beach hotel and the other of gastronomy.
This will lead to an understanding of the functions the group wishes the hotel to have and their relation to each other. With this in mind, the design was worked further on. The volumes, floorplans and relations of functions were investigated together with tectonics aspects to ensure the hotel gives the right atmosphere.

3.1 Case studies - Svinkløv Badehotel

Svinkløv badehotel

After a fire took most of the original historical seaside hotel, a new design of a seaside hotel with 36 rooms and a restaurant was built.
We will investigate Svinkløv Badehotel to understand what a beach hotel is and how it functions, in both a technical aspect and the historical- and food-staging aspects.

Site:
Svinkløvvej 593, Svinkløv, 9690 Fjerritslev, Denmark
Architects:
Praksis Arkitekter, original Ejnar Packness
Year: 2019, original 1925

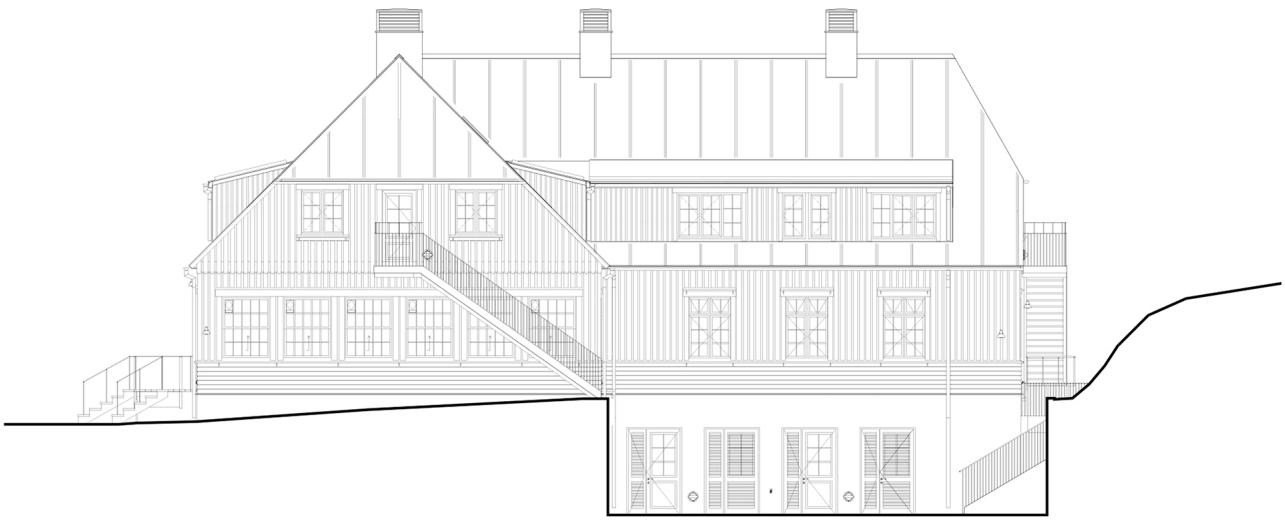
Project Brief

The project Svinkløv Badehotel is a seaside hotel built on the premises of re-establishing an already existing historical building that burned down in 2016. It is a historical site in the outermost dune range overlooking the North Sea. The site has given many visitors memories of the area and natural light. The new building is designed with a balance between the old hotel and a 2.0 of the design, giving the design a clear reference to the beach hotel before the fire but with updated aspects around the hotel. The new design has maintained the 36 rooms as before though added bathrooms to all rooms. There is also kept the idea of 4 living rooms in different colures: purple, yellow, red and blue. The biggest change is in the façade having more windows to ensure more light into the rooms and having a view of the specular nature. The newest regulations are complied with, and more room in the basement for the kitchen and other staff-related functions. The kitchen is around 120 m2 with seven cold rooms, with a small sideboard kitchen on the ground floor. The rest of the basement are offices, staff areas and storage.

Design principal

Intersection
There is an intersection between the hotel's front and customer friendly area and staff area. The basement draws this intersection, no public functions are to be found at the basement level making the basement an area the hotel guest doesn't need to visit. This creates an easy workflow for the employer that only functions in the basement or ground level. Still, the cleaning needs to transport their equipment from the basement to the ground and second floor because it is kept in the basement away from guests.

An intersection is also between outside and inside, with many but small size windows. There is no floor to ceiling windows or glass walls, so the windows are more framing of the nature with the smaller size. They let sunlight into the rooms but shelter the viewer from the microclimate allowing comfortable viewing of the unique nature.



Illu. 50. Svinkløb Badehotel facade section west, credit Praksis Arkitekter

Illu. 51. Atmospheric picture of Svinkløv Badehotel, credit Jens Lindhe

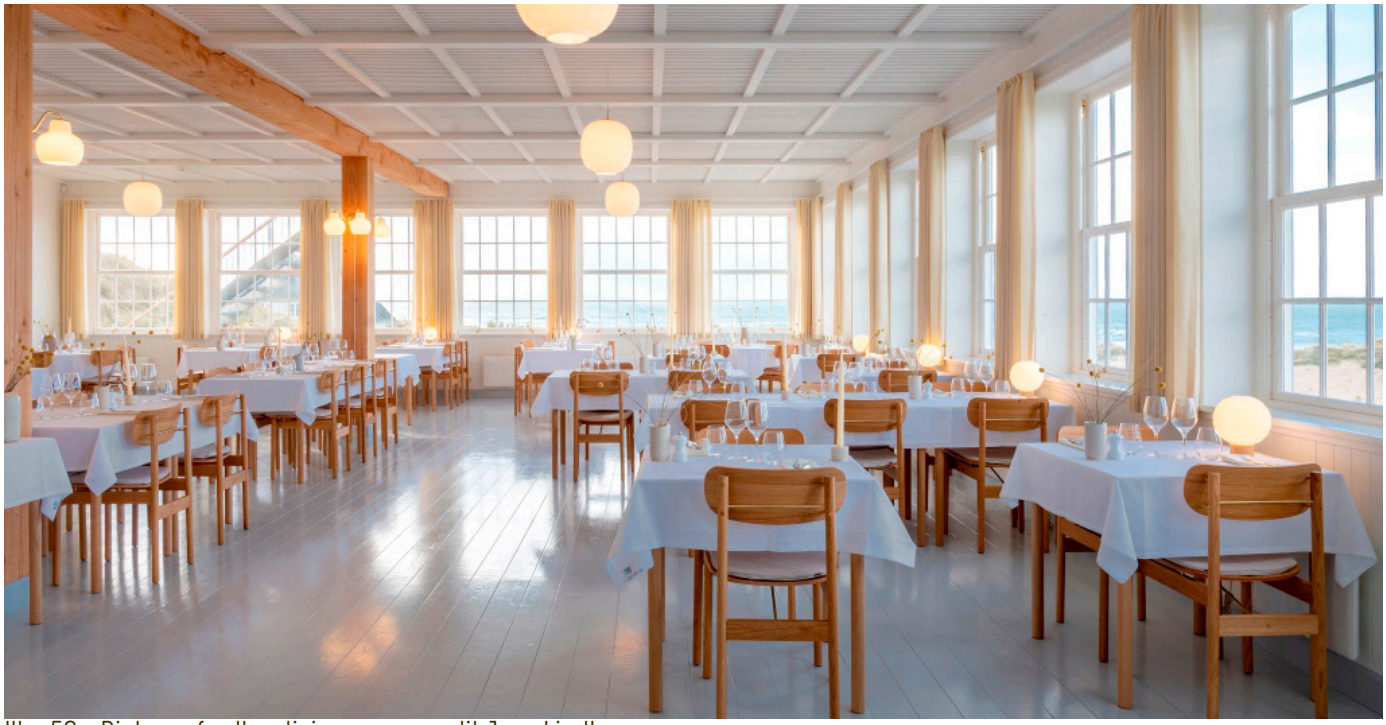
The place

The nature of the site is a windblown dune and Lyme grass-covered landscape close to the raw North Sea. Svinkløv badehotel lies as a sanctuary in the raw nature, protective from the wind and weather. The design is affected by the landscape by having small windows to not lose heat through the openings. Most of the hotel rooms are placed on the second floor to ensure the view of the nature that the hotel lies in between.

Staging

The hotel is also placed in the northern part of Jylland, so the food in the hotel is very affected by the local area and the seasons. There is a history of fishing in the area, so the local fishermen's catch or the in-season meat is what is served together with side dishes made of ingredients in season.

This is also a good way of staging the local area's nature, history, and ways of doing things. By serving the local food, the hotel creates a relation to the placement. This ensures that the hotel wouldn't



Illu. 52. Picture of yellow living room, credit Jens Lindhew

make sense to be placed elsewhere with the same functions and ideality.
Since the hotel is a re-build of the old hotel on a site, Svinkløv hotel is also staging being this old hotel, matching many of the idyllic ideas of the older times with beach hotels along the west coast. The painted wood boards and light colours give a calm atmosphere that also is represented in the outer façades being painted in light grey that stands out from the dunes. The hotel from the outside matches the old hotel, staging the similarity with the old times, even though the hotel functions as a new hotel with technologies.

Illu. 53. Picture of purple living room, credit Jens Lindhe

Sustainable tectonic
The structure is made of wood as frames going through the building. The frames are visible through the building, with columns being visible in some of the rooms, like in the purple and yellow “living room”. This creates honesty and warmth in the rooms since the raw wood colour contrasts the painted, light-coloured rooms.
Choosing wood as the main construction material is done in relation to the old building but also as a sustainable option. The same can be said about having windows with one layer of glass. This is not a very sustainable option when looking at energy demand, but it uses less material. The one-layer glass windows have the effect of the hotel only being usable in warmer seasons.

The Space
The different living rooms have different functions throughout the day; this ensures that the guest gets a new view of the landscape as the day passes. The rooms are also very different sizes and furniture, which gives different experiences. The yellow living room has light yellow curtains, white tablecloths and light floors, walls and ceilings. This contrasts the warm wood columns that warm up the whole room together with the natural sunlight.
While having the purple living room has couches and coffee tables to give a more casual vibe.

The plan have the colour of living rooms noted

Illu. 54. Plan of Svinkøv Badehotel, credit Praksis Arkitekter

Illu. 55. Picture down red living room, credit Jens Lindhe

Conclusion

From this case study, the design will be impacted by the knowledge of how wood affects the atmosphere of a room, and it helps to soften the look of light rooms. The division of guest area and staff area is helpful both in the overall guest experience and in the employees' workday. The framed view of nature creates small special moments for guests walking around the hotel. This is made with the many windows on all four facades.

The staging is very distinctive with the "cloning" of the old beach hotel that burned down. The atmosphere is made to be old fashioned and light, and "airy". There are no bright colours that don't match the theme of the old beach hotel.

The upbow mentioned creates what many think of when asked about a beach hotel: a light, airy atmosphere with magnificent views of nature and landscape.

Svinkløv beach hotel doesn't focus on sustainability even though they have made choices that can be deemed more sustainable than other choices. The design does, though, also have choices that are not sustainable. The one-layer glass is impractical, and a lot of energy has to be used to have the hotel at an acceptable temperature.

3.2 Case studies - Noma 2.0

Noma 2.0

Noma is one of the best restaurants globally with 3 Michelin stars, located in a newly renovated historical building with the public functions made into a small village in the front.
We will investigate Noma 2.0 to see how a newly built restaurant known for its staging and experimental food vision is staging the food and atmosphere.

Site:
Refshalevej 96, 1432 København K, Denmark
Architects:
BIG - Bjarke Ingels Group
Year: 2018

Project aim

The world-famous restaurant Noma 2.0 is located in the historical site of Søminedepotet. The idea behind the design is all the ”front of the house” and “back of the house” are divided into functions. The “back of the house” is in the historical warehouse, while the “front of the house” is made into individual buildings in the front, connected with glass as a little village with the service kitchen as the heart. Each individual building has its own characteristics that suites the atmosphere and function in the specific room, example is the lounge with a fireplace, and the floor and walls are made in light brick to amplify the feeling of the whole room being a fireplace (Archdaily, 2018).
The kitchen is placed in the middle of the cluster to give the chefs an easy overview of the guest and how the evening is going. In the same way, can all guests also see and experience the kitchen and their food being prepared from the moment they walk in and when seated at the table.

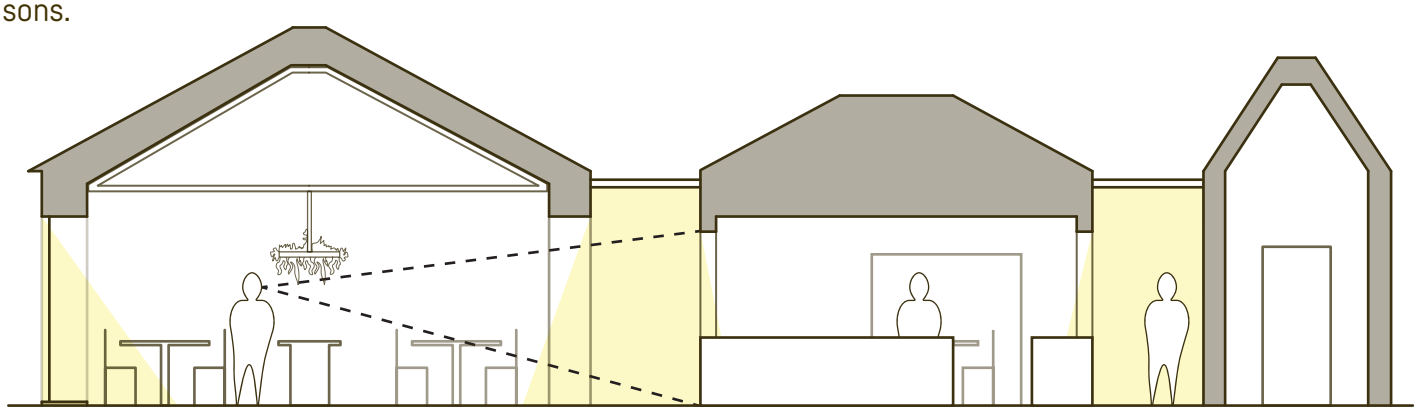
Illu. 56. Evening picture of Noma 2.0, credit Rasmus Hjortshøj

Design principal

Intersection
The intersection between normally hidden functions, the kitchen, and the dining area, is interesting. The connection is both visual and physical. It is primely done with the different buildings being connected with glass roofs that make it possible to have open and connected rooms even between different "buildings". The connection is staging the food preparation for the guest but is also helping the chefs know when to come up with the next dish creating an overall better experience for the guest.

The glass roof also creates an intersection between inside and outside and between safety and the forces of nature. The glass roof panels give both guests and employees a view of nature. From one's seat, the change in seasons, daylight and weather can be seen. This creates a different atmosphere throughout the year that affects the stay at the restaurant and works great with the food served after the seasons.

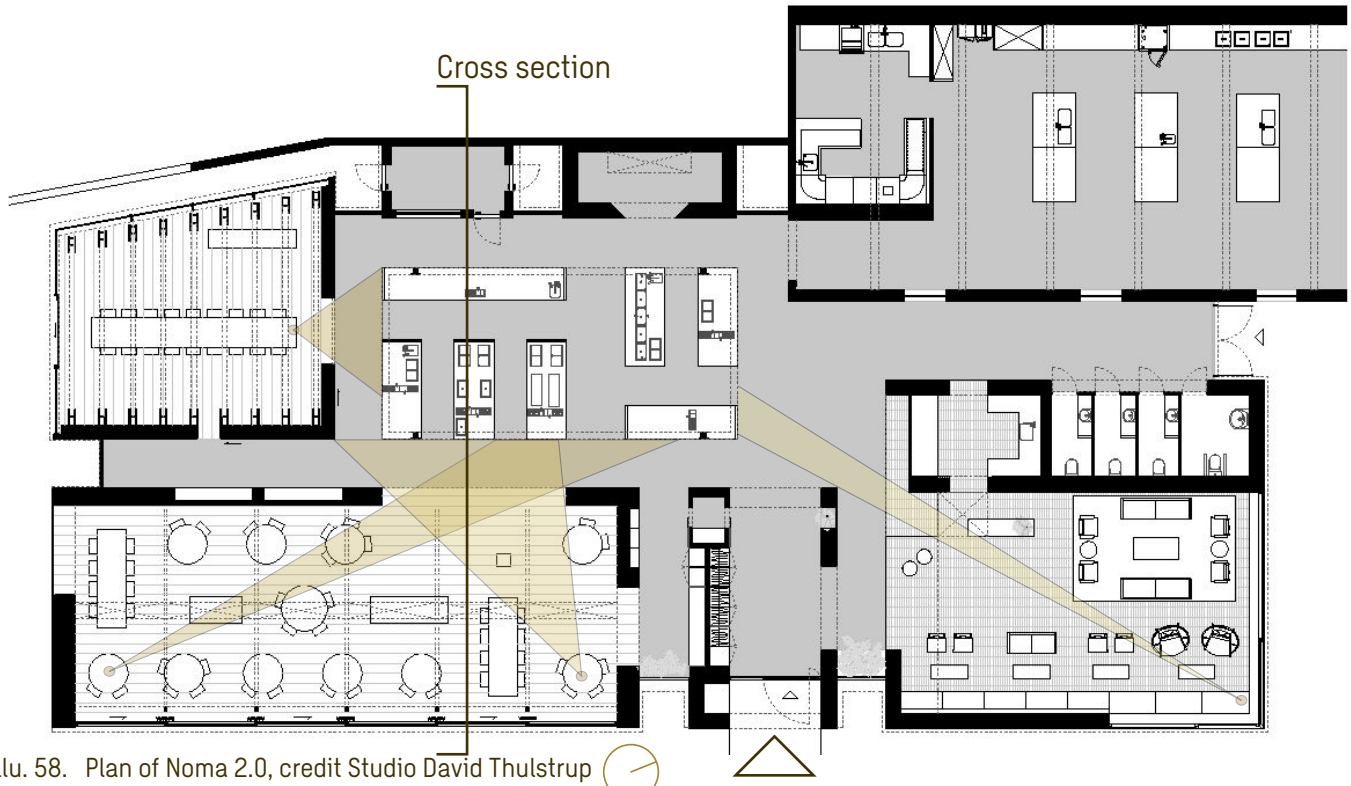
Sustainable Tectonic
The construction is made of wood, being visible in many places around the building. The tectonic element in the "private dining area" is most prominent. The construction is visible and used as atmospheric and tectonic as a display rack. It is made of big logs of wood that seem stable and strong with an interesting joint detail. The structure goes across the room perpendicular to the dining room, which creates a shorter feeling of the room since the gaze stops at each beam. There is not written about there being a focus on sustainability in the choice of materials, both for construction and for facades. Looking at the choice after, the choice of Nordic Douglas and Oak is a sustainable choice because of the low need to travel to get from production to site.



Illu. 56. Estimated cross section of Noma 2.0

The Space
The different buildings each have a different atmosphere that creates different spaces. E. g. are, the main dining area in a building in light wood with big openings toward the kitchen and entrance and big windows toward nature to create a connection. The actual room is made of wood in all facades; the floor is made of long wide planks, the walls are brick-like walls of wood, and the roof resembles "neatly piled wood at a lumber yard"(Archdaily, 2018). It is filled with tables oriented toward the kitchen or the outside.

Illu. 57. Noma 2.0 Picture of glass connections, credit Ramsus Hjortshøj



Illu. 58. Plan of Noma 2.0, credit Studio David Thulstrup

Illu. 59. Noma 2.0 Atmospheric picture of hall past preparation kitchen, credit Rasmus Hjortshøj

Staging

Noma is staging the food and the process behind it. This they do by having the kitchen in the middle of the other rooms. This creates a visual and auditory connection that enhances the food experience. Noma is famous for its food experiences, and by showcasing the making of the food and the experience, the staging of the food gets greater, and the guest comes out with a better experience. The theme is Nordic Cuisine which is amplified by the decoration and materials. Light wood and clean materials with decorations of dried seaweed and other local plants help the staging of the Nordic Cuisine. They also frame the food with the light; the kitchen is well lit up while the eating areas are more dampened and have a “spotlight” on the tables. This will draw people’s eyes to the kitchen and the chefs.

There is also the change to walk down the more private behind the scenes area, where a long shelving system is along with the kitchen and staff areas. The shelving system has food storage and aquariums with fish and crabs that are in theme with the served food and an opening into the preparation kitchen and storage, which all help with the staging of the food and the whole food experience Noma provides.

The Place
The placement of Noma 2.0 in Christiania using a protected ex-military warehouse they have transformed to house the more hidden functions. This can be seen in the outer part of the old storage facility, but the new houses, which are the guest's primary place, are new buildings made of typical Nordic materials and appearance. The new buildings are made as small huts that match the placement in the historical park with many trees the building is placed into. It gives the guest a feeling of being in a cabin in the forest with a chef standing at the fire preparing your food while looking at the seasons and changing of daylight and weather.


Illu. 60. Noma 2.0 From kitchen to dinner area, credit Rasmus Hjortshøj

Conclusion

Noma has always been about food experience, but with the new building, the staging of food is also connected with the architecture, atmosphere and placement. The different things all go together to create a better experience for the guest that enhances the experience of the food and the staging of the making and eating of the Nordic food. The placement of the kitchen as the heart with connection to all the seating makes sure there is a natural flow of experiences and that the guest gets more than just the experience of eating and the experience of seeing the food being prepared. It is staging the process of the food.

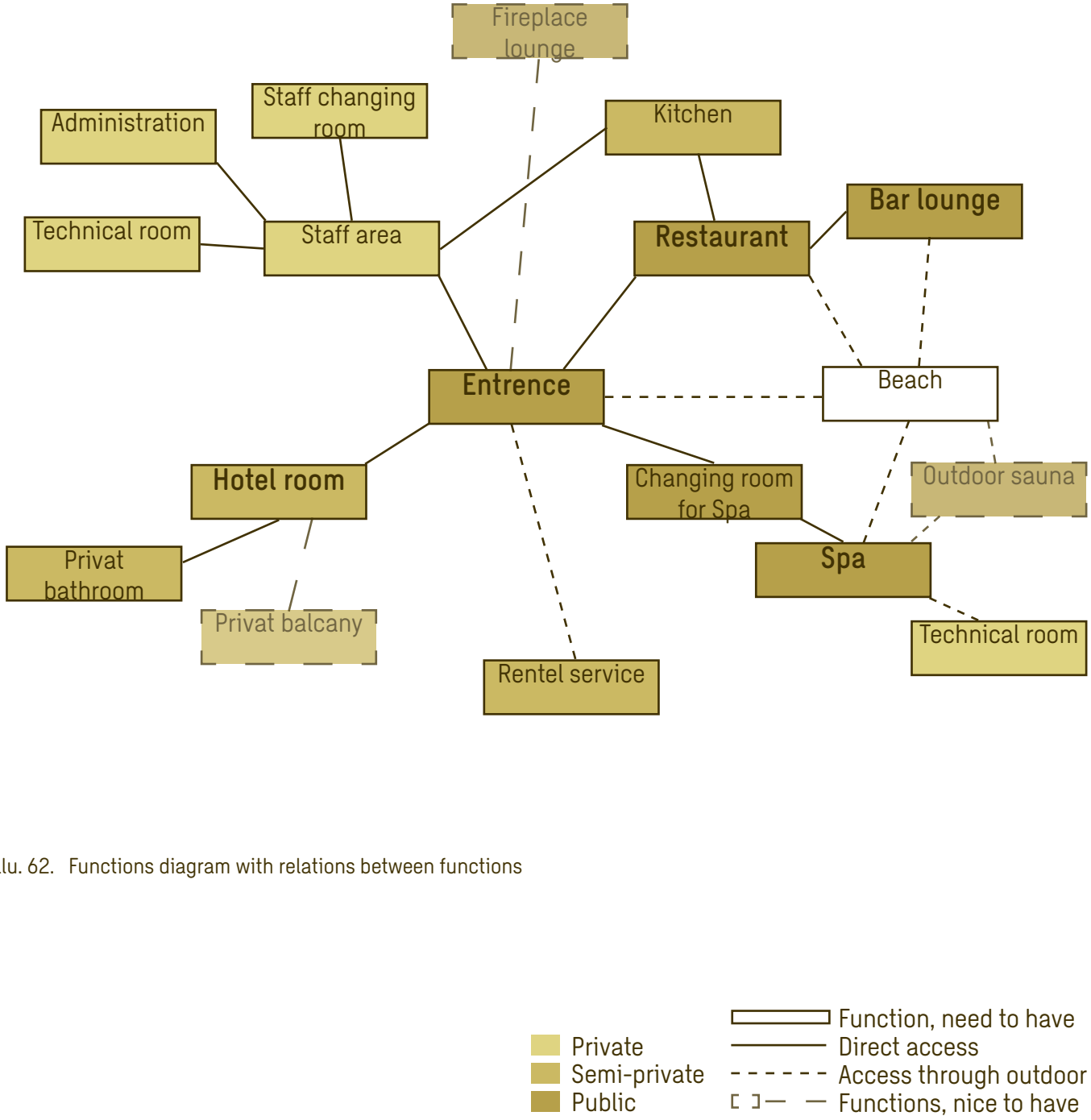
The natural materials help set the right atmosphere around Nordic, nature and might even wilderness, that play into the campfire and huts, and "food making/cooking" in the middle.

This can be used in the design with having the benefit of an open kitchen that creates an extra layer of staging for the food and Samsø as food storage. The downside is the noise, but it can be worked around with materials and sizes.


Illu. 61. Noma 2.0 From dinner area to kitchen, credit Rasmus Hjortshøj

3.3 Funktion diagram

The case studies and analyses made earlier, there is collected and chosen the functions that make the most sense to the hotel the group have chosen. The relationship between them is shown in the illustration 63, where functions are divided into “need to have” and “nice to have”. And colour divided into what is private and public functions.



Illu. 62. Functions diagram with relations between functions

3.4 Room program

The different functions are arranged in table 64 to easier give an overview of demands for the functions, such as size, wishful orientations and user, as well as is provide an overview of requests for the functions, such as size, wishful orientations and user, and whether the room should have any special characteristics.

Function	Size (m2)	Orientation	User	Special characteristica
Entrence	20-40	A	A	Acces to restaurant, spa and rooms
Resturant	5 per table	S , W	A	View and acces to outdoor
KItchen	70-100	N , E	S	Open kitchen to stage food and prep-kitchen more hidden
Storage	As big as posible	A	S	
Bar lounge	40-60	E , S ,W	A	Should have acces to outdoor
Wellness /spa	100	E , W	A	Close to beach and acces, some functions outside
Chaning room	30	A	A	
Rentel service		E	A	Should have activites that relate to water and Samsø
Public toilets	5	A	H & R	
Technical room	As big as posible	A	S	
Hotal rooms	20-30	S , W	S & H	Should have view of water
Bathrooms	5	A	S	
Staff area	30-50	N , E	S	Light and close to hotel facility
Administration	8-15	N , E	S	
Cleaning	As big as posible	A	S	Needs a room on all floors
Staff changing room	20	A	S	

Illu. 63. Room program with wishes for functions

Orientation: A - All directions, N - North, E - East, S - South, W - West
User: A - All people, S - Staff people, H - Hotel guest, R - Regular guest

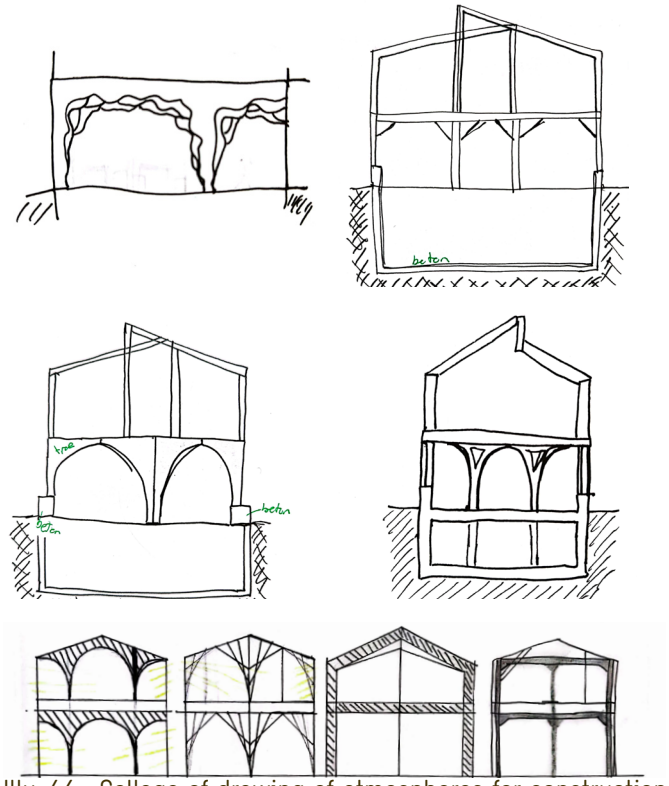
3.5 Design phase 2

Construction atmosphere

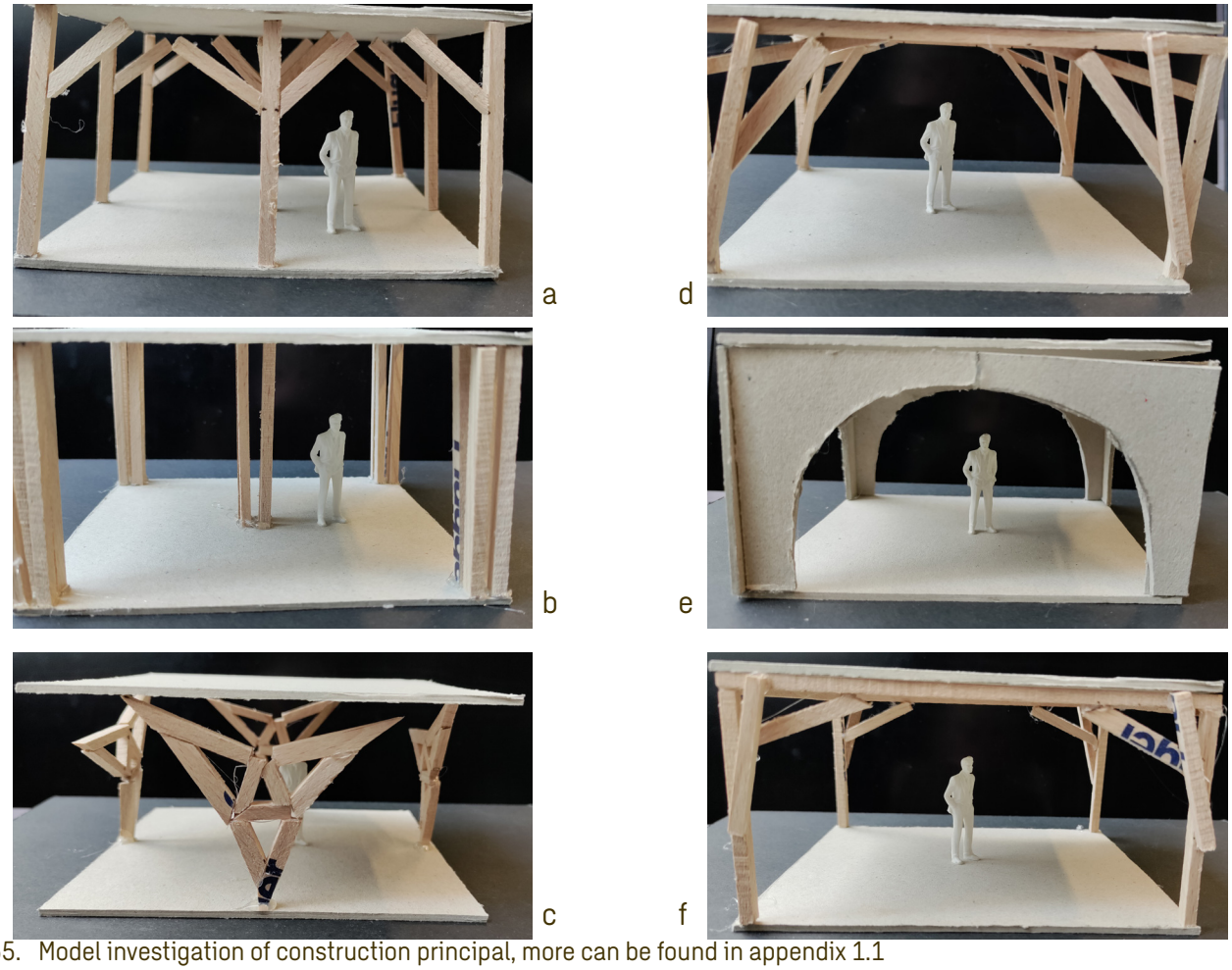
Another aspect looked at staging and creating atmospheres through the construction. Here were built many models were a few are showcased in the illustration. The idea of arches in creating atmospheres was ideal but needed long distances to benefit.

There are elements from the study that can be used further in the design process, such as the need for the construction to be on a line and the idea of visible frames of construction. The arches can be removed with visible construction, and it still creates the sought-after atmosphere.

The constructions such as illustrations 104a and b, with the many elements tied together, look good and imitate the old construction on site. This gave the idea of reusing the existing construction of the two halls. The other building's construction is then created to use the same tectonic language to create sympatry throughout the building even when it goes from 1 to 2 stories.



Illu. 64. Collage of drawing of atmospheres for construction, more can be found in appendix 1.1



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Illu. 65. Model investigation of construction principal, more can be found in appendix 1.1

3.5 Design phase 2

Functions on volume and floorplan

After gathering information through the case studies, the plan for the building was looked at. There were investigated with different placements of functions since the size of some has been helped defined by case studies.

Illu. 66. Ground floor design of functions

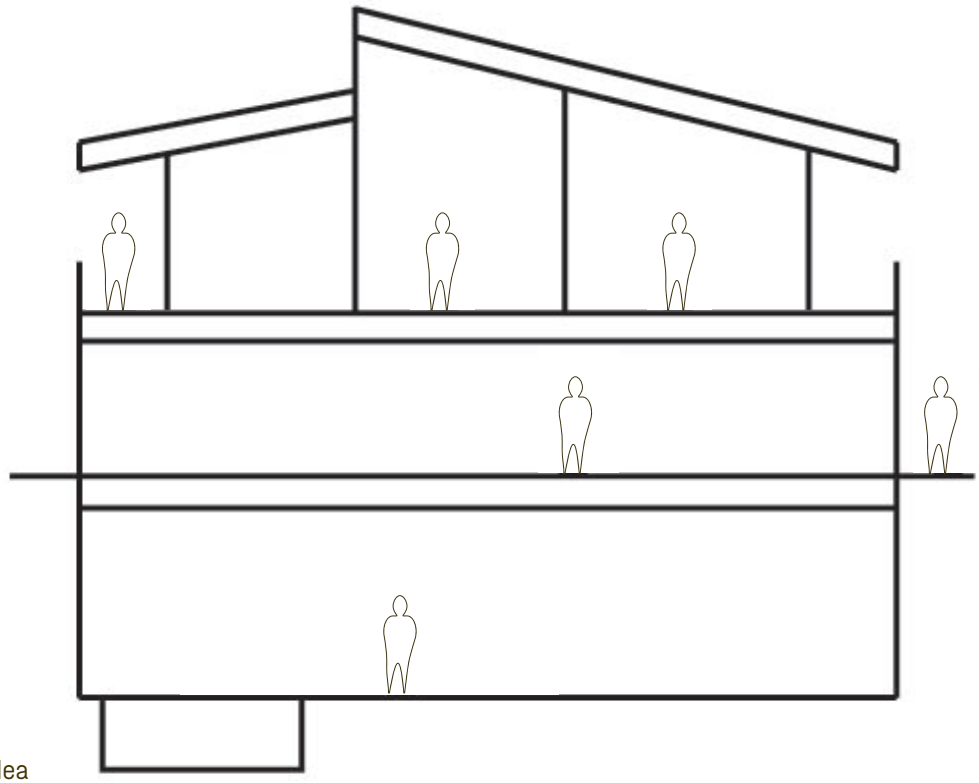
Illu. 67. Anther ground floor design of function

3.5 Design phase 2

Functions on volume and floorplan

There were looked at what functions were the most important and their size criteria. This was then considered simultaneously worked at while the floor plan and size were worked with. This ended up in the size of the hotel being cut down. First, the basement was removed with the downsizing of the spa. While this happened, the first floor was made into only rooms, but the building in the context did not

Illu. 68. First floor plan of rooms with different sizes

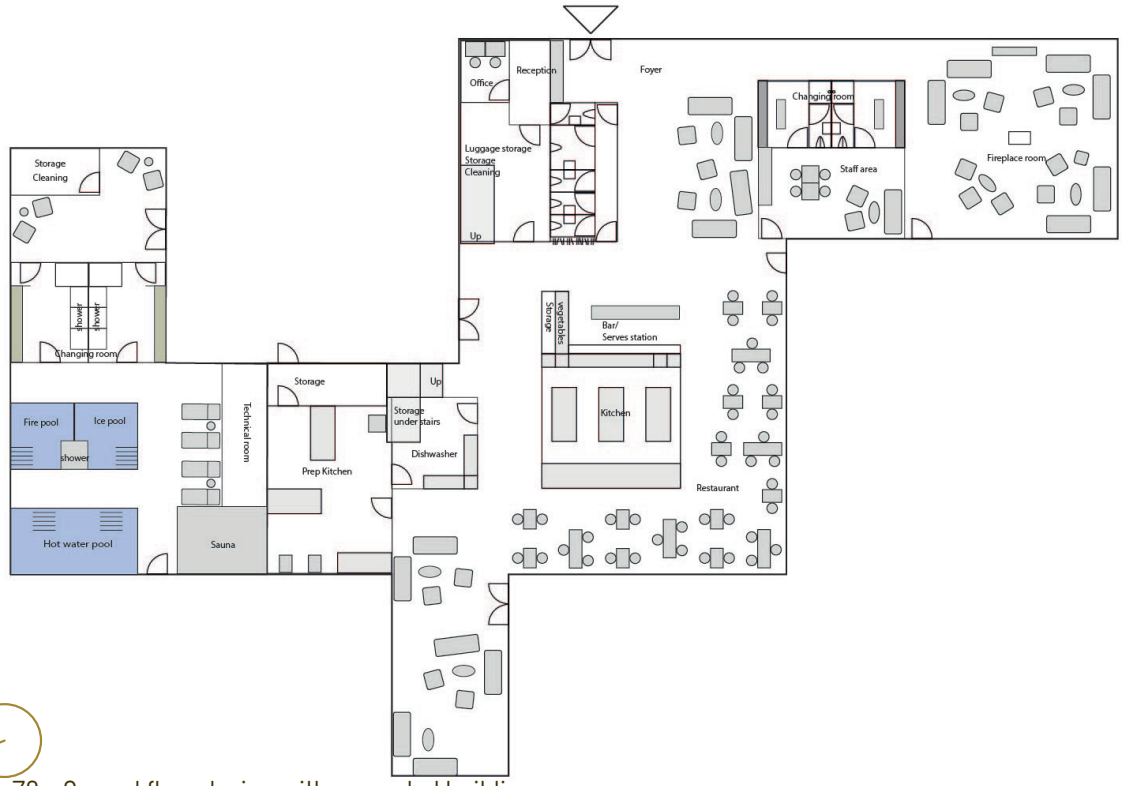


Illu. 69. Cross section through idea

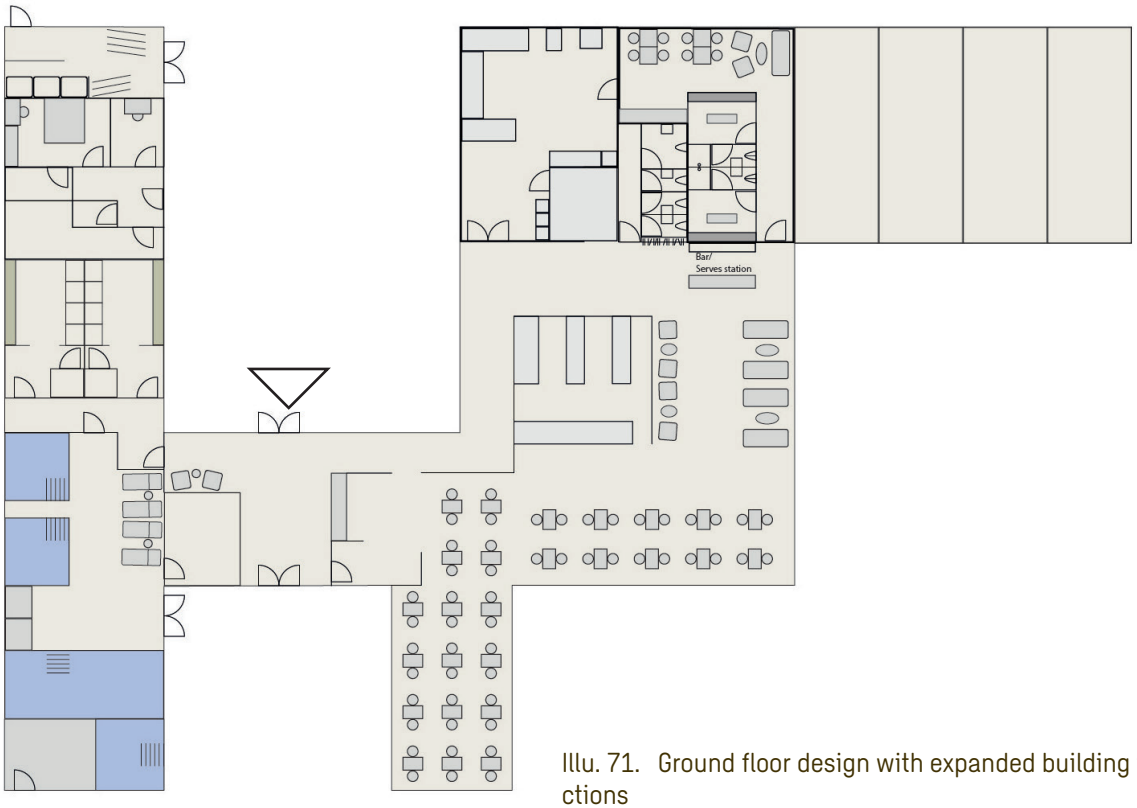
3.5 Design phase 2

Functions on volume and floorplan

fit; it looked too big. Expanding the building shape on the ground floor was then looked at without taking too much space away from nature restoration. Here was again worked with functions in that area and what size was needed to accommodate them.



Illu. 70. Ground floor design with expanded building

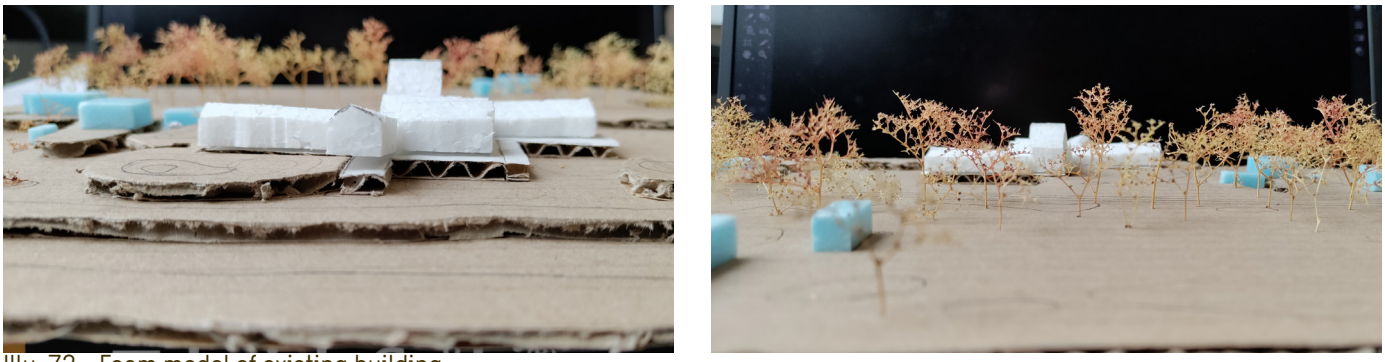


Illu. 71. Ground floor design with expanded building in both directions

3.5 Design phase 2

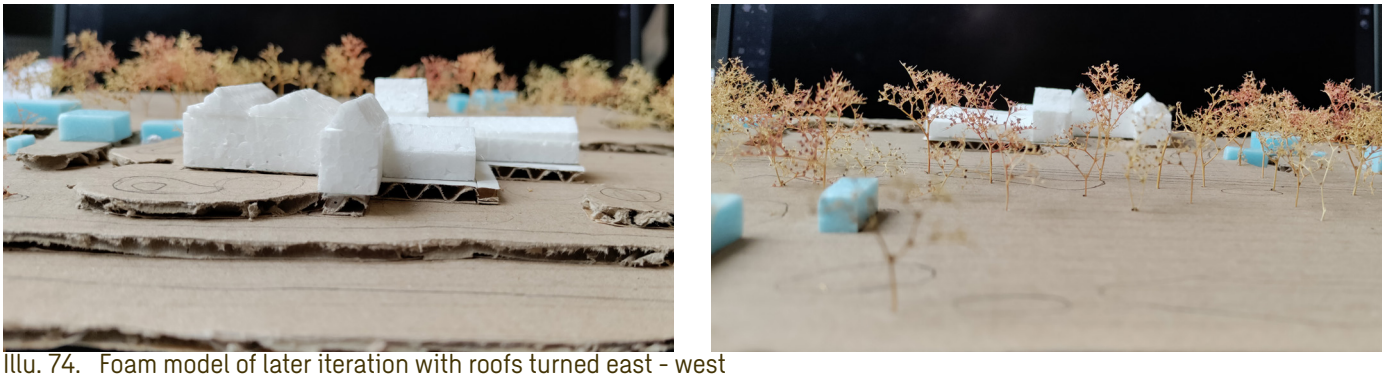
Foam study of building size

While designing the building shape, foam models were used to see how the design would lay in the context and how it related to it.

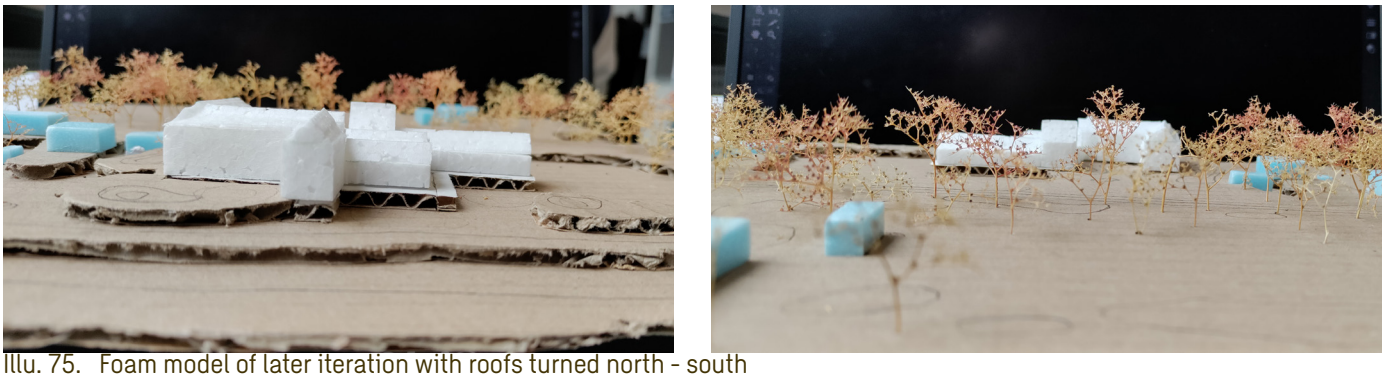


Illu. 72. Foam model of existing building

Illu. 73. Foam model of first iteration with 2 floors all over



Illu. 74. Foam model of later iteration with roofs turned east - west

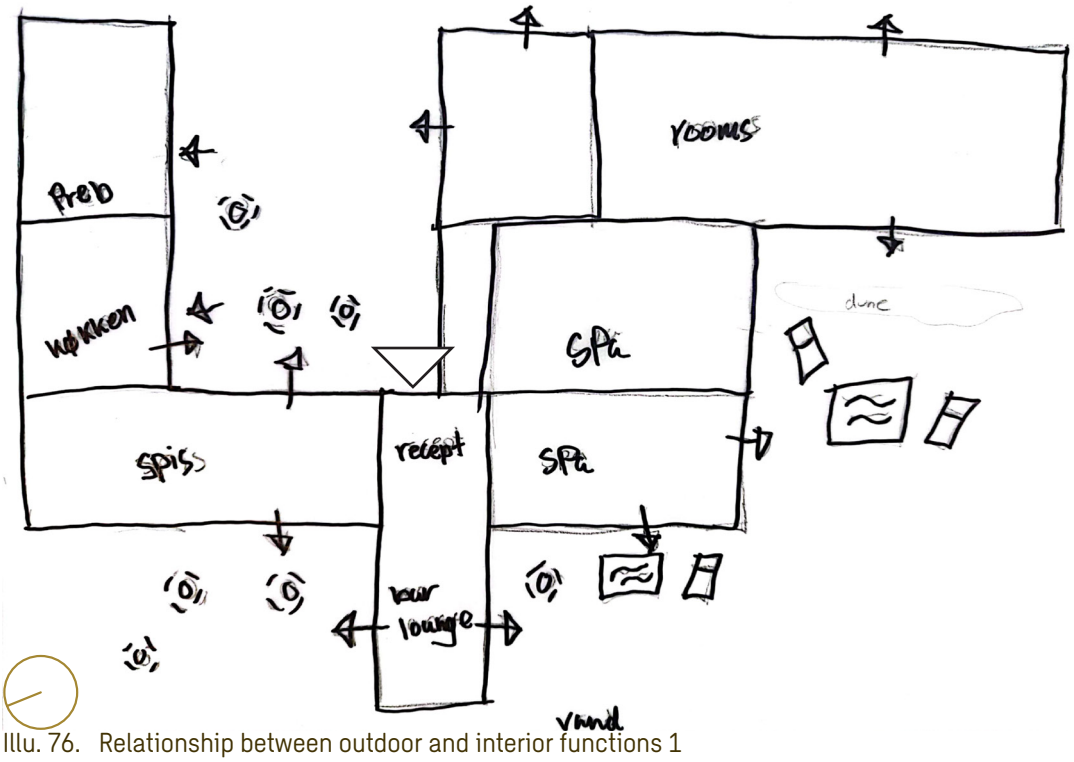


Illu. 75. Foam model of later iteration with roofs turned north - south

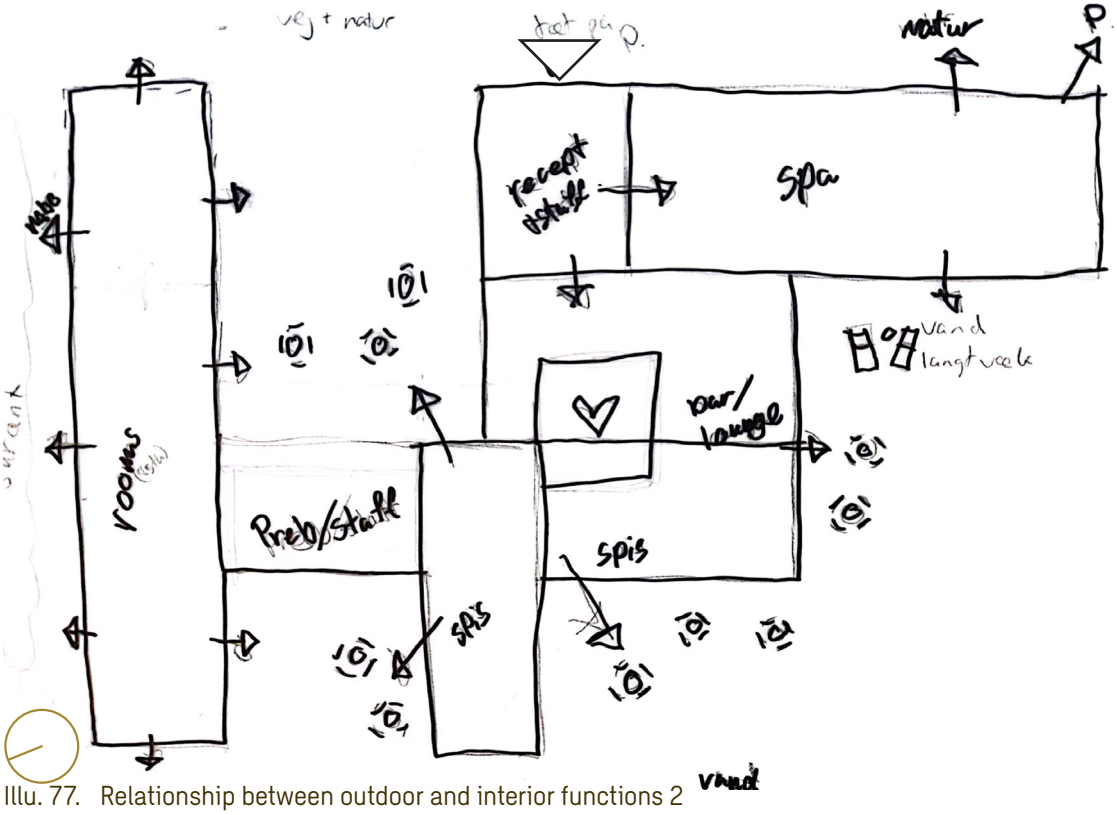
3.5 Design phase 2

Functions in relation to outdoor and eachother

To connect all the functions, they were worked with as zones and placed in the shape to see how they relate to each other and the outside area. This can be seen in the illustrations 75 to 78. There was worked with having the kitchen as the centre room, the heart of the building. But from there, the “heart”s location should be compared to other functions and entrances of the building. From this, the placement

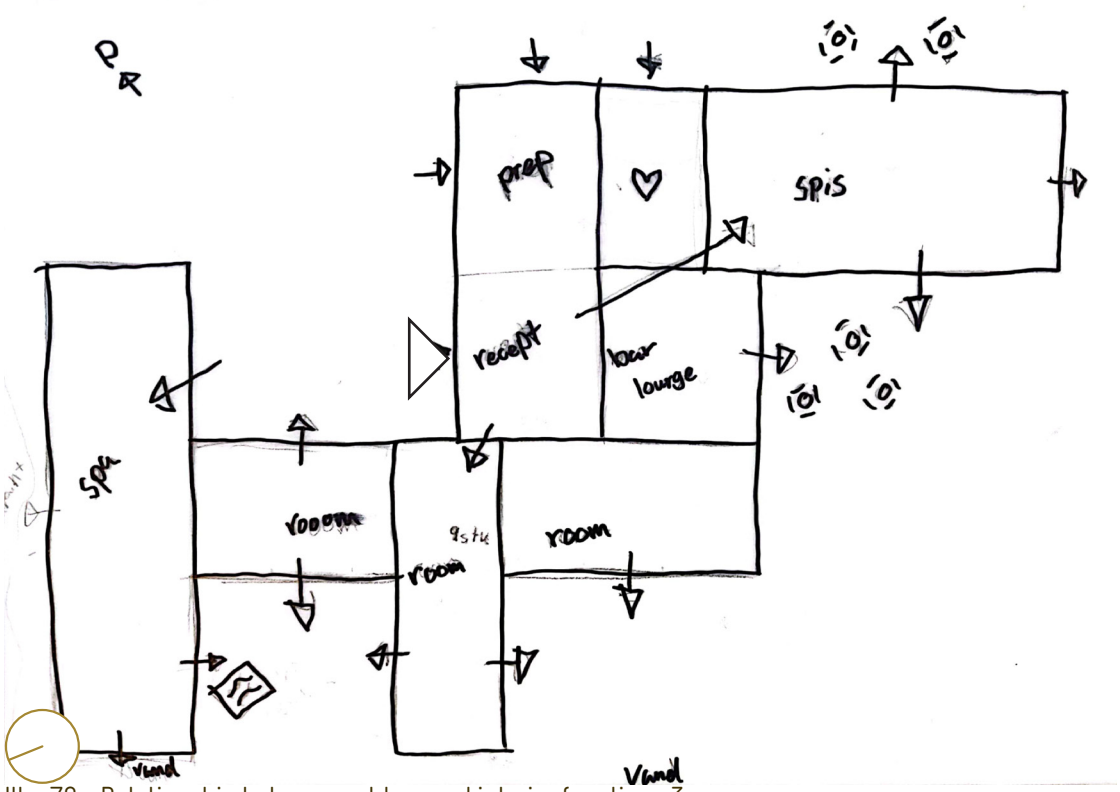


Illu. 76. Relationship between outdoor and interior functions 1

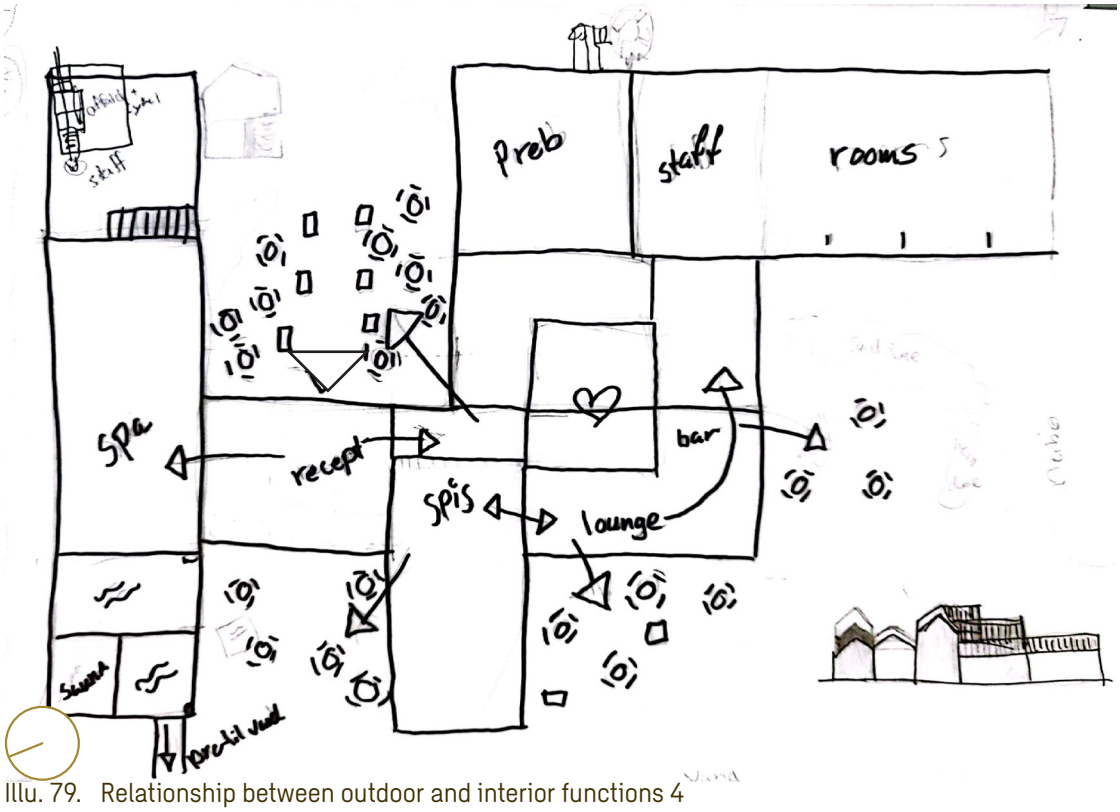


Illu. 77. Relationship between outdoor and interior functions 2

of the entrance in the middle with a restaurant on one side and a spa on the other side was chosen. This allowed the restaurant to use all the optimal placements throughout the day for outdoor serving.



Illu. 78. Relationship between outdoor and interior functions 3



Illu. 79. Relationship between outdoor and interior functions 4

3.5 Design phase 2

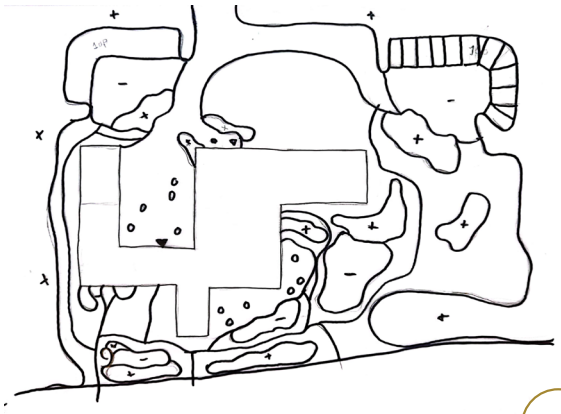
Outdoor area design

To further develop the ideas from illustrations 75 to 78, the outdoor area was begun designed. The focus area for the outdoor area is a restoration of the nature, the areas close to the building and coastal protection, with dunes and water-collection areas. There needed to be found space for parking on the site.

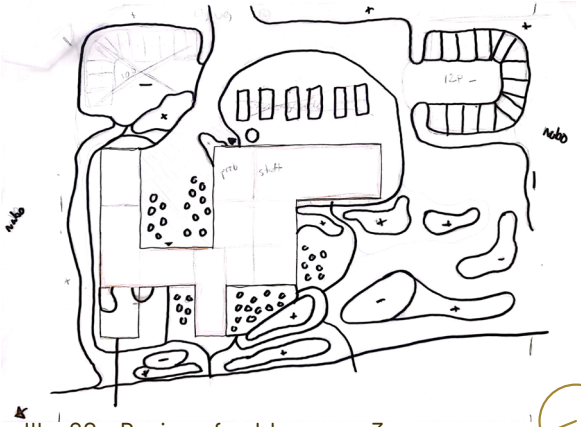
The first iteration had the parking along the road, but this hid the hotel from the road. The parking was then divided and hidden in the corners, but with the new building expansion, the building was again hidden behind the northern parking, as can be seen in illustration 80.

So, the option for all the parking in the south towards the road was the option that made sense.
The overall plan for the nature restoration was dunes with local plant seeds spread over the site. This will make sure new species don't get introduced to the area.

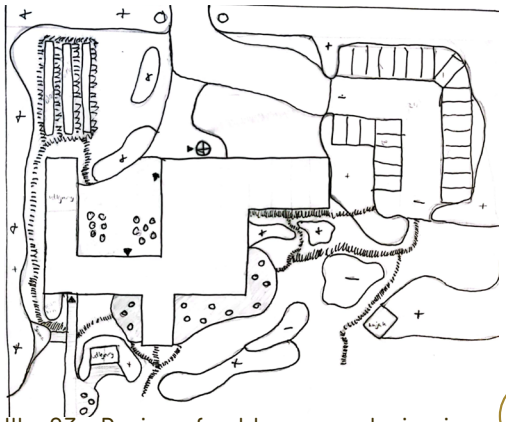
Illu. 80. First thought on design of outdoor area



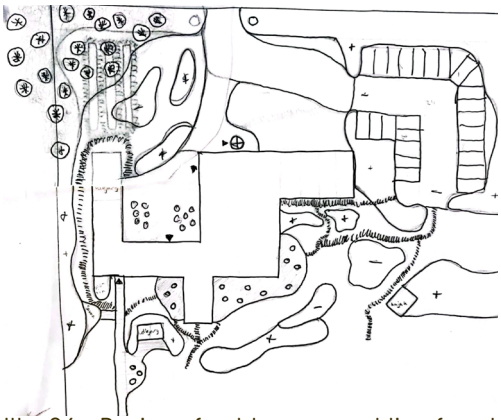
Illu. 81. Design of outdoor area 2



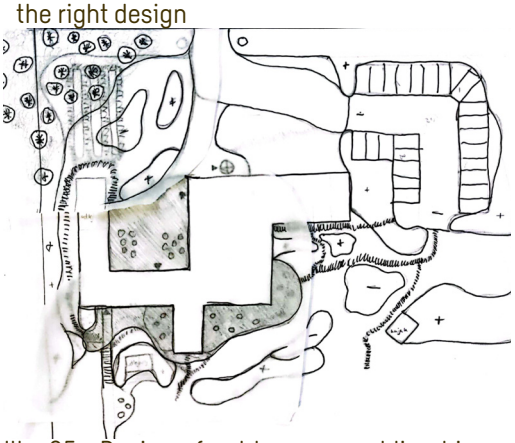
Illu. 82. Design of outdoor area 3



Illu. 83. Design of outdoor area closing in on the right design



Illu. 84. Design of outdoor area adding forest to design



Illu. 85. Design of outdoor area adding bigger terrace toward west

3.5 Design phase 2

Design of kitchen in relation of bar and fireplace lounge

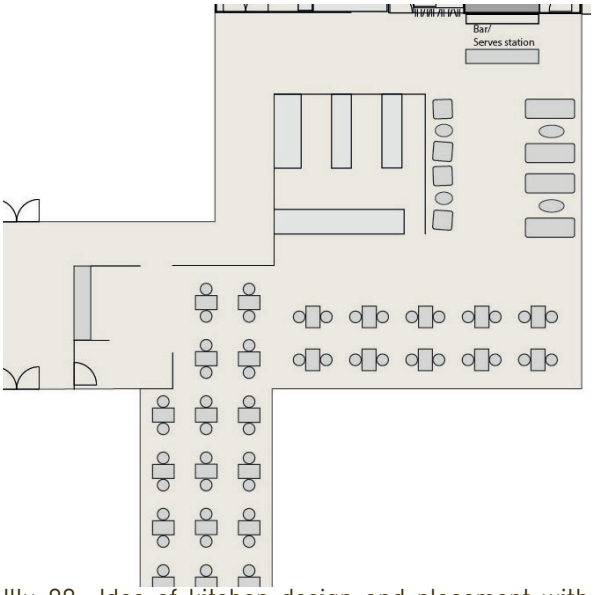
Iterative throughout the process, there have been zoomed in to different areas to design the actual functions. The following are the process in each area.

The kitchen has gone through different placements in the building and what relation it should have to the bar or lounge. As can be seen in illustrations 85 to 89, the kitchen has had the bar close to an extension of the restaurant but also on the other side of the entrance.

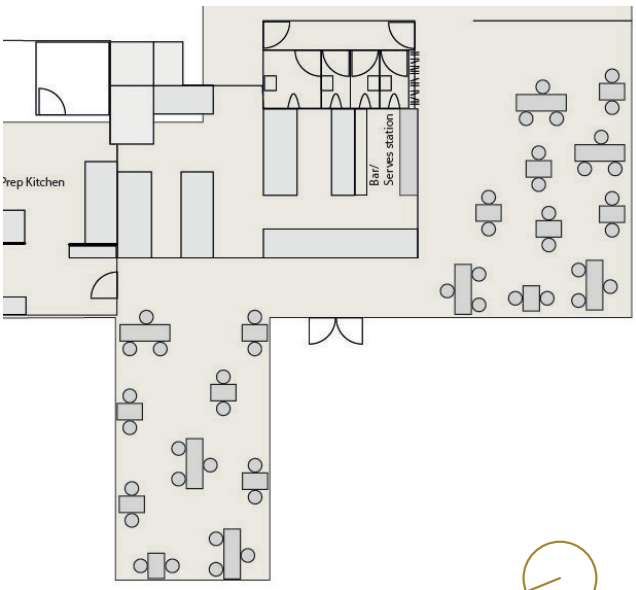
After investigating the kitchen as the heart room, the design of the actual kitchen and seating placements were worked on.

Illu. 87. Idea of kitchen design and placement 2

Illu. 86. Idea of kitchen design and placement



Illu. 88. Idea of kitchen design and placement with a little open kitchen



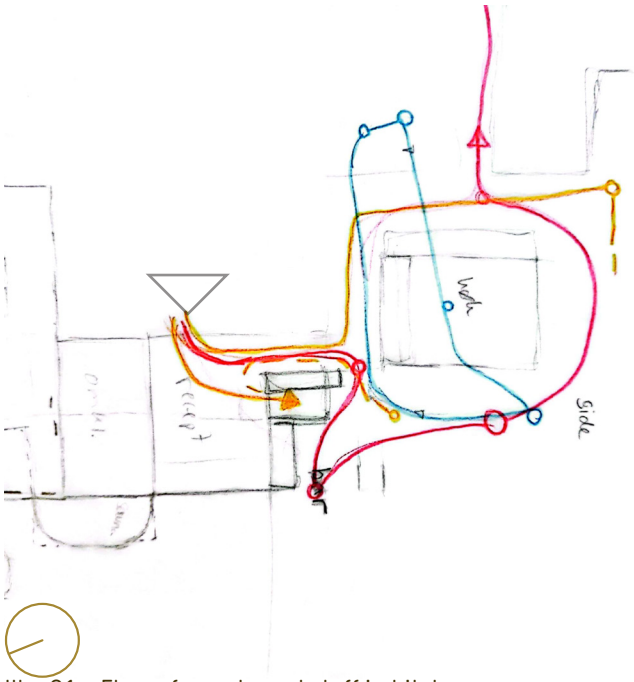
Illu. 89. Big open kitchen with divided seating

Illu. 90. Final placement, but more to change of kitchen

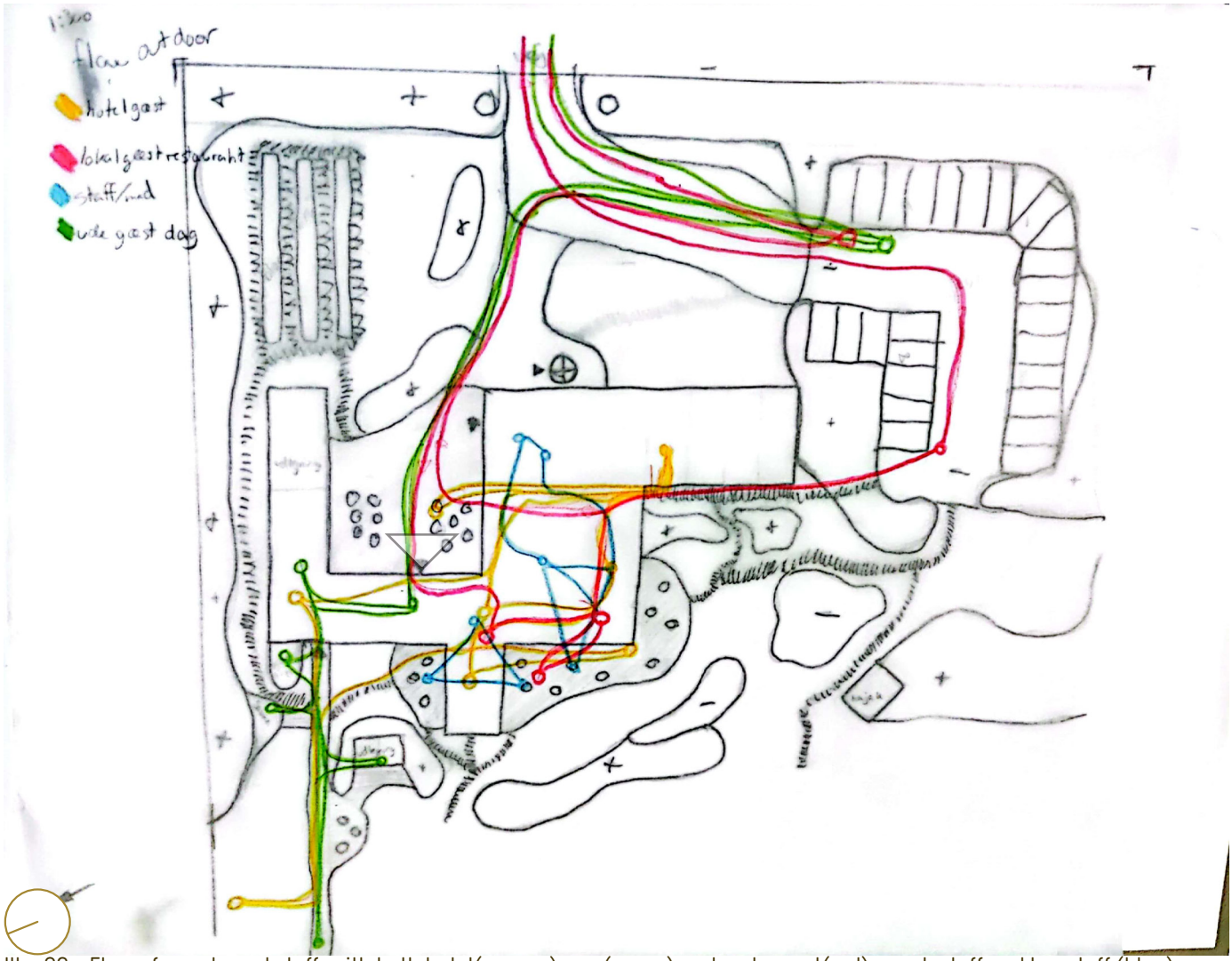
3.5 Design phase 2

Flow of people and plates

Throughout the process of designing and placing functions, the flow has been thought about. Both the flow of people differencing of guests, locals, and staff and the flow of plates in the restaurant. As can be seen in illustration 90, the old designs had a problem with many paths crossing throughout the day. In a newer design, the flow (illustration 91) is less dense around one area and more divided into restaurant, hotel room, and spa flow.

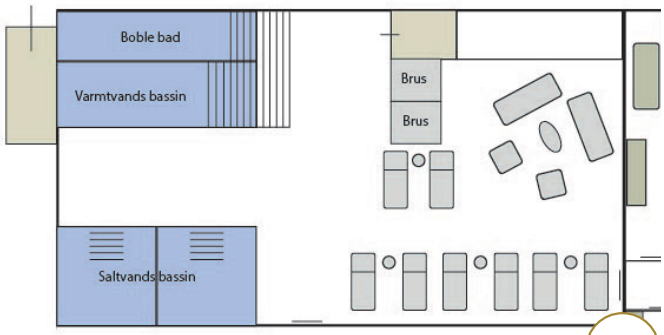


Illu. 91. Flow of people and staff in kitchen area



Illu. 92. Flow of people and staff, with both hotel(orange), spa(green) and restaurant(red) guest, staff and bar staff (blue)

Spa and wellness placement and floorplan design

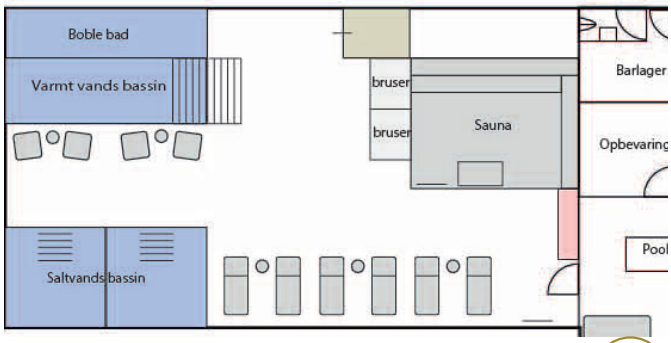


Illu. 93. Ground floor of spa in two levels

Illu. 94. Basement floor of spa in two levels

Illu. 97. Iteration of spa with expansion of building shape

Illu. 95. Second idea of basement spa in two levels



Illu. 96. Second idea of ground floor spa in two levels

Lastly, the design of the spa has gone some significant changes, from being in the basement to being split over the basement and ground floor, as was seen in earlier illustrations. Here there were two-floor plan concepts, both using two existing concrete mixing vessels as spa basins. With the wish to delete the basement, the new design of the spa was downsized to just the minimum to fit into the existing building toward the north.

With the expansion of the hotel with a new building, the spa goes from spare to full of activities. There was plenty of space for all the functions in the spa. But because of the exterior look, the building was again down to just expanding towards the east. This still leaves plenty of space for the spa. Consistent throughout the design has been the reuse of the two existing concrete mixing vessels as pools for the spa.

3.5 Design phase 2

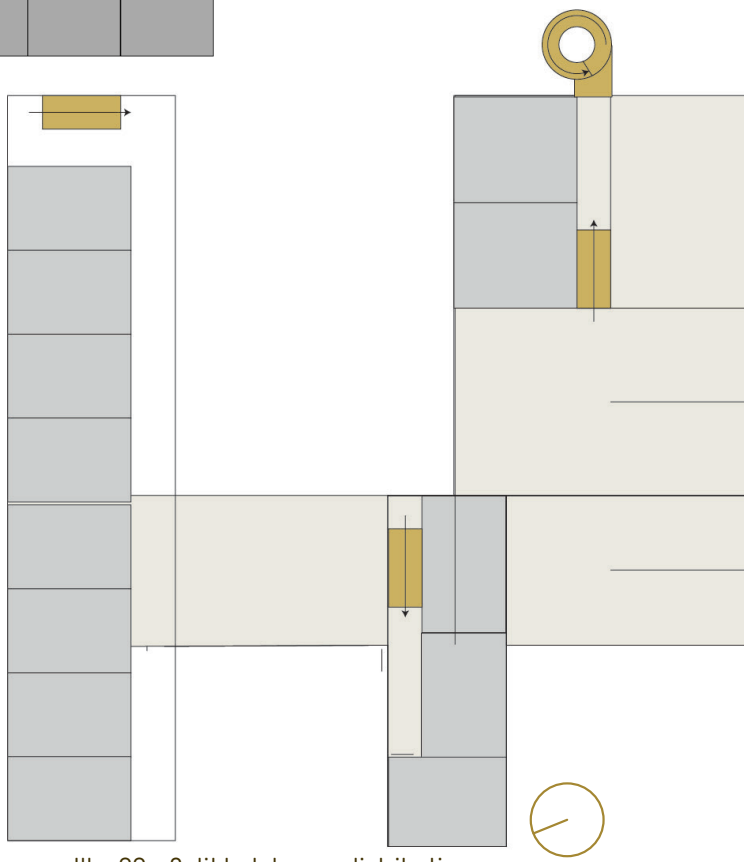
Hotel room placement and floorplan design

Next was looking at how the rooms should be placed and how the individual rooms should be designed. As seen in the earlier plan drawings of the building (illustration 97), the rooms were placed on the first floor to ensure privacy and a view of the water. There were five different sizes that were filling the whole first floor.

After some consideration, the size of the hotel was evaluated, and a 2-story high building on the site was very dominating compared to what the area could take. The expansion towards the north removed the basement and minimised the upper floor.

Here the hotel rooms were divided to create a less dominant second floor. With the change of more space, rooms on the east ground floor were considered, and with space for all the other functions in the rest of the building, the rooms were designed.

Illu. 98. First floor hotel room distribution

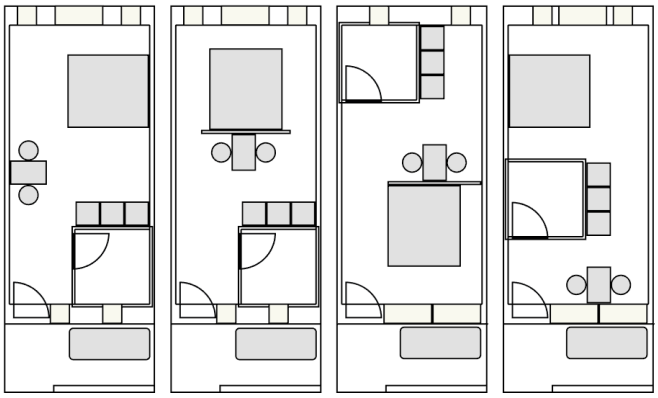


Illu. 99. Split hotel room distribution

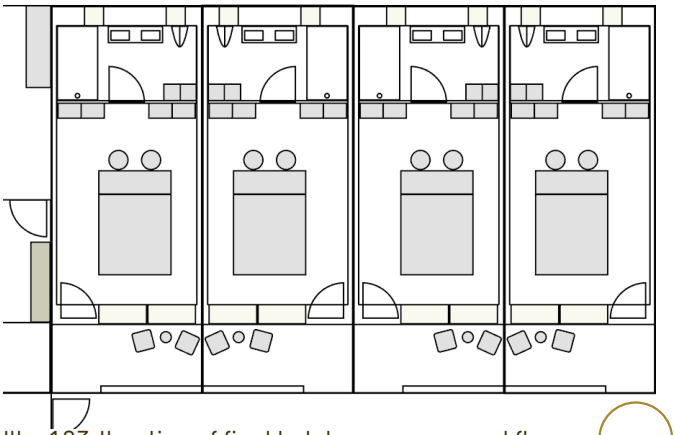
3.5 Design phase 2

Hotel room placement and floorplan design

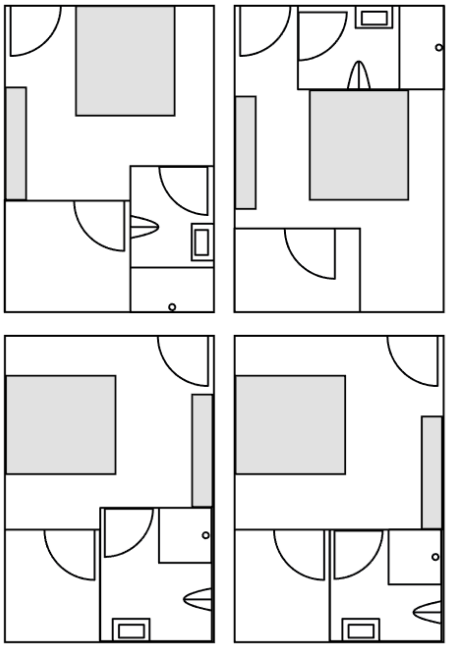
The room that still needed to be on the first floor was worked with both in relation to staircases and functions. The rooms ended with being on a corridor in the middle of the hotel. There were also worked on the floorplan of the hotel rooms, as seen in illustration 100-102.



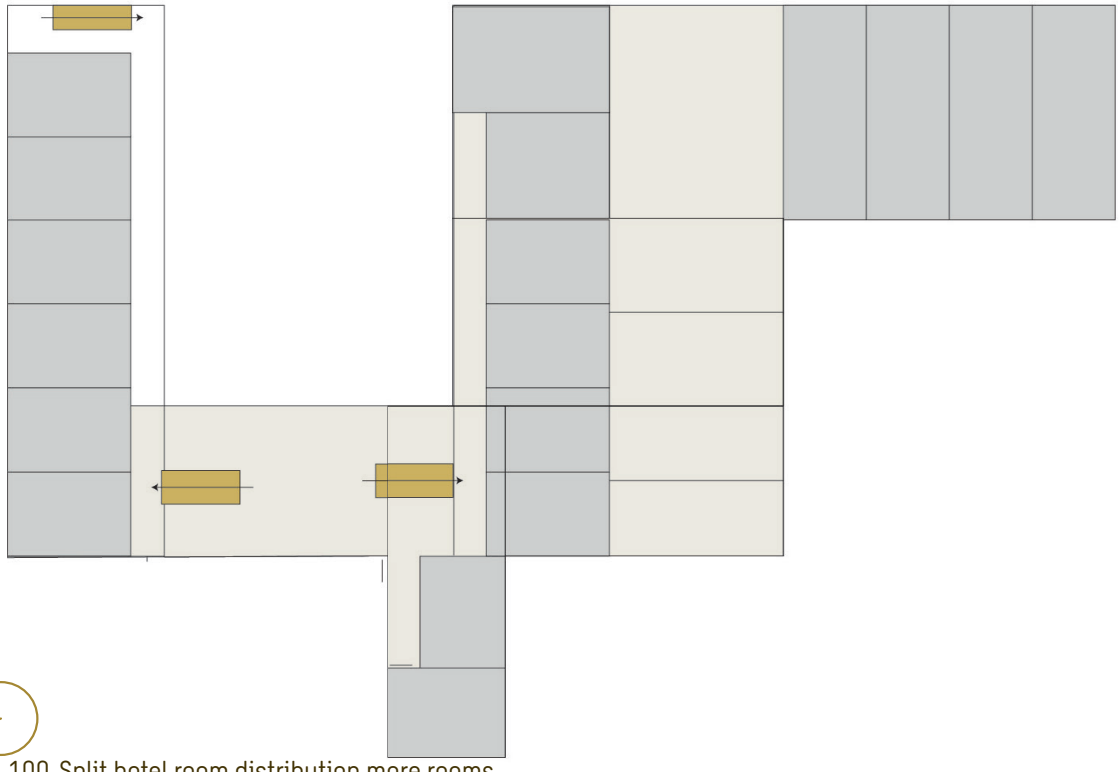
Illu. 102. Investigation of hotel room on ground floor



Illu. 103. Iteration of final hotel room on ground floor



Illu. 101. Investigation of hotel room design first floor



Illu. 100. Split hotel room distribution more rooms

3.6 Partial conclusion

Through the analysis and sketching of the generator, there were learned aspects of how Svinkløv Badehotel is staging their beach hotel and placement on the west coast. Noma 2.0 is staging their gastronomy by letting the guest watch and smell the cooks prepare the food; this affects more senses which gives a more significant experience.
A room program and functions diagram were created with the wishes of functions and their relation by looking at the two cases. With this in mind, sketching was begun. Many things were looked at, but the overall design shape and placements of functions were found. The situations-plan was also designed, and the relation between inside and outside was an essential factor. The construction was also investigated and how it could create an atmosphere through the hotel.
With an overall design, the small details needed to be looked at. The hotel needed to be influenced by the last generator of Sustainable, which can help influence many of the small details.

Illu. 104. Atmospheric picture of Samsø

4.0 Sustainable

The generator “Sustainable” will be investigated and drawn upon in this chapter. Firstly, there will be looked at façade design in both Life Cycle Assessment on different materials and how those materials look together. Then passive strategies will be looked at and how the façade affected the strategies. Next, will there be looked at iterations on how indoor climate and energy demand have affected the design. The construction placements in the hotel and calculations of the dimension of construction to see what atmosphere they can help create while making sure the building stays upright and utilises as much of the material as possible.

4.1 LCA and reuse from site

LCA and reuse from site

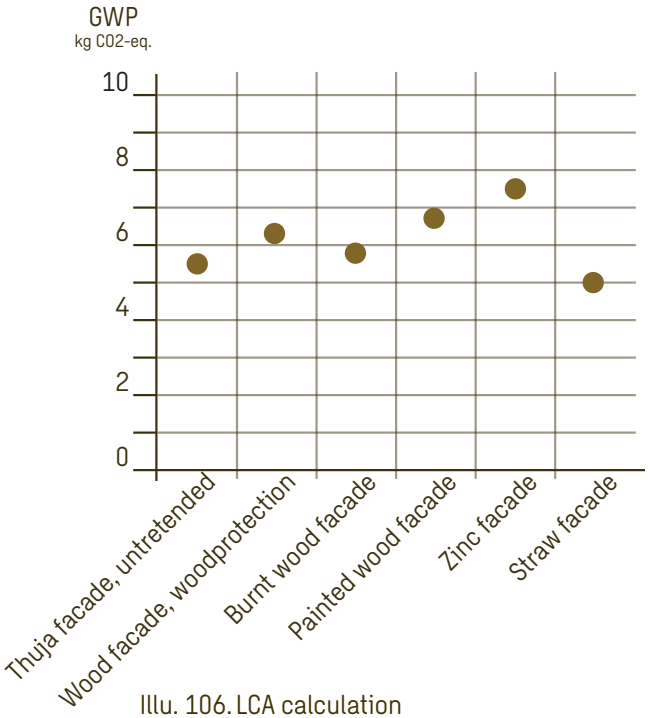
Material investigation (LCA, reuse, combination)
As written in the sustainable theory, an option to work with environmental sustainability is through materials. Here there are options such as biogene or renewable materials but also reuse of materials from the old factory.

For the coastal protection, there were looking at building an entirely new concrete 75 cm wall, but this was taking up a lot of material that could be avoided to produce. There were then looked at other options for securing the building. Here was looked at wood, but for this to be watertight, it needs to be constant under water to work best. There was also the original wall that could be transformed and reclaimed into the new waterproof cladding. Here there was worked with both having it cut down to the needed 75 cm and to make it stand whole with the new building "popping up". This is a more sustainable choice than making new concrete, saving around 96% CO2-ækv—Per m³ concrete (VCOB 2021).

Illu. 105. Materials investigated in LCA

The new building behind also needs some façade-cladding, which, as said in the design guide, needs to contrast with the existing wall. Here were made different Life Cycle Assessments (LCA) for different materials that either match the building customs of Samsø or have other references to coastal architecture. There were tested untreated thuja, wood with wood preservative, zinc cladding, burnt wood, straw façade and painted wood façade. The different materials were compared on their global warming potential (GWP) with the same insulation and inside cladding. The different materials score can be seen on illustration 107, but to sum up, the straw façade has the lowest score with burnt wood and untreated thuja on a close 2. and 3.
Since the building needs to have more footprint than the original building has, there is needed to be found alternative coastal protection for those areas. Here, a concrete material makes the most sense, and since it is only a bit of the wall, the amount of needed concrete is small.

The wall also needs some insulation, where alternative materials are considered, such as biogene materials. Here there are many options, such as seashells, hemp, wool or straw. With the history of Samsø producing an absurd amount of straw, straw insulation was chosen since the transport will be close to non.



Illu. 106. LCA calculation

4.2 Material relation

Material relation

In this phase of the design process, the design has begun being made in 3D. The materials are starting to play a role, and the process of looking at the different LCA scores of materials is initiated. With the knowledge of the coastal protection going 0,80 m up, the need for the materials to be waterproof was not there; it just needed to be able to withstand the harsh climate of the beach. There were first tried different materials in connection with the two existing façade materials, where a conclusion of the materials should contrast to make the yellow stand out.

As described in 4.1 LCA, straw has the best LCA score, but straw creates a new problem of the façade cladding being thicker than the original yellow brick wall and therefore sticking over. Thus, the wood options were investigated further with the wish to have the new façade contrast with the yellow, a dark material where chosen. The most sustainable dark option is the burned wood since untreated wood gets greyish after some years. The greyish colour was ideal for the walls with the new coastal protection since the grey wood will harmonise with the grey concrete.

Illu. 107. Vertical wood facade cladding investigation

Illu. 108. Wide wood facade cladding investigation

Illu. 109. Dark Zinc facade cladding investigation

Illu. 110. Straw facade cladding investigation

Illu. 111. Existing facade cladding investigation

Illu. 112. Burned wood facade cladding investigation

4.3 Passice strategies

Passive strategies - ventilation and solar heat

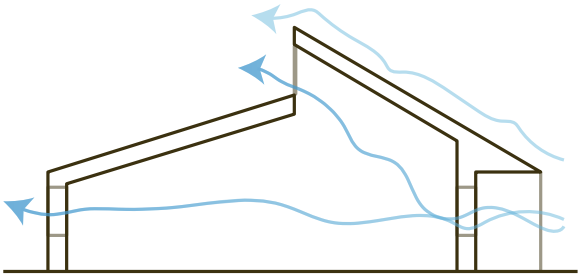
The design has, throughout the process, had the information about sustainable choices and strategies that subconsciously have affected the design.

One of the ways that subconsciously have affected the design was passive strategies. The design has used solar passive strategies such as solar heat and natural ventilation through buoyancy, single- or double-sided ventilation.

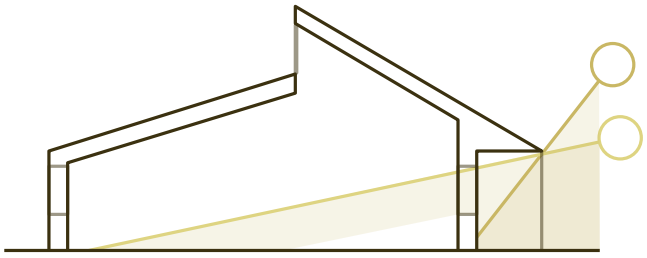
To ensure the building doesn't get too much sunlight in and thereby solar heat, the window placement has been thought about. The glass frame is placed in the middle of the wall to ensure the window still has the opportunity to be used as quick seating. This gives the option to use both the indoor and outdoor window frame for resting while helping with shading the window for some of the summer sun. This is an option because of the thick wall needed to ensure a good U-value with alternative insulation material.

As illustrated in illustration 114, the hotel rooms on the ground floor use ventilation through both buoyancy and double-sided. The solar heat from the big west windows is shaded to ensure less direct light in the summer but lets the spar winter sun into the rooms.

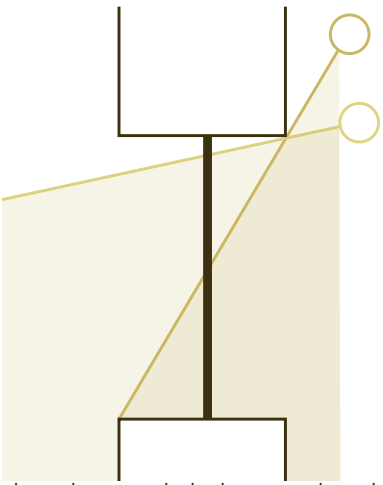
The single- or double-sided venational has been used all over the hotel. In the kitchen, toilets, and spa area, the natural ventilation would not be enough to sustain the minimum demand from BR 18, so hybrid ventilation strategies are used here.



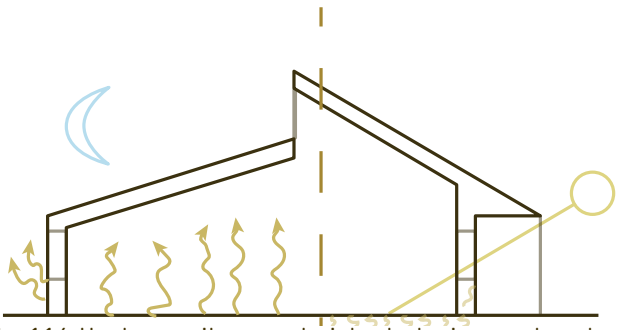
Illu. 113. Natural ventilation strategies used on design



Illu. 114. Solar heat strategies used on design



Illu. 115. Window placement strategy used on design



Illu. 116. Heat capacity on materials strategies used on design

4.4 Design phase 3

Indoor climate

With the building getting built in 3D, a better understanding of the spatial aspects of the building was given concerns about the indoor temperature in the rooms and the restaurant.

Therefore the 24-hour average temperature in the two areas was calculated for a day in June. In the different iterations, the window went through changes to help with the calculations and the aesthetic part. The windows were too small in the first iteration to look good aesthetically, so the window got bigger and let more solar heat in even though the max temperature was under the 26 C demand (Bygningsreglementet, 2022).

With the second iteration, the temperature in the small room got too high, so to lower the temperature to more acceptable degrees, different things were done, as can be seen in illustration 118. This made the average temperature 23,6 C in the hotel room and 22,7 C in the restaurant. The restaurant's temperature needs to be lower since the guest will stay in the restaurant throughout the day. While in the hotel room, the guest will be out when the high temperature of 25,9 C is happening since it is likely in the middle of the day when they are exploring Samsø.

	Kitchen/restaurant 24 hour temperatur	Room 24 hour temperatur
Information	Area: 125 m2 Direction of outside wall: West and South	Area: 15,4 m2 Direction of outside wall: West and South
1. iteration	1,3 x 1 m and 1,3 x 1,5 m windows 23,0 C 24,9 C	2,1 x 1,5 m and 1 x 0,9 m windows 23,0 C 24,9 C
2. iteration	Bigger windows 1,6 x 2 m 23,3 C 25,9 C	Bigger window 2,1 x 1,5 m and 1,6 x 0,5 m 24,4 C 27,4 C
3. iteration	Medium windows 1,6 x 1 m 23,4 C 25,5 C	Curtens to create screening from 1 to 0,85 23,9 C 26,7
4. iteration	More ventilation from 0,6 to 2 l/s per m2 22,7 C 25,0 C	Correct small numbers that was wrong 23,6 C 25,9 C

Illu. 117. 24-hour average temperature calculation for restaurant and a hotel room

4.4 Design phase 3

Window study and engery demand

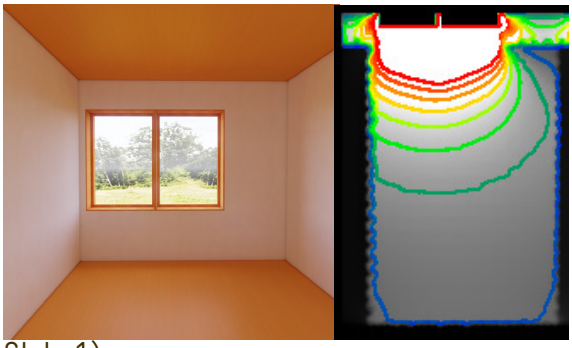
Throughout the process, the window design has been iterated both in look and in daylight it gives to the room. As can be seen from illustration 120 the most beneficial in daylight is style 1) but astatically the style 2) windows have more charming and reference to Samsø building customs.

After a rough building shape was found, an energy-analyses were started. Even with Samsø's energy coming from sustainable alternatives, a wish to have the building be in a low-energy class was still relevant. This meant that the energy demand should be below 27 kWh/m2 year.

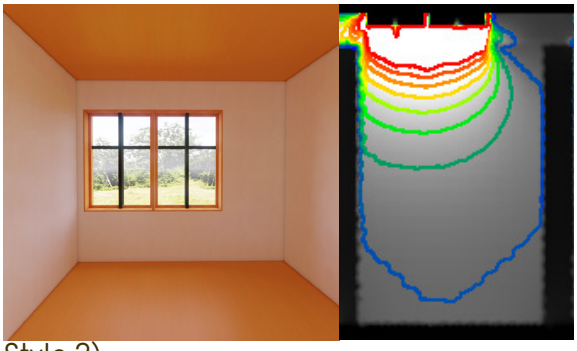
As can be seen from illustration 119, there were many iterations to get a lower score. On the fifth iteration, the score was also under, but the daylight data showed that some of the rooms didn't have enough daylight, so new windows were added that gave enough light as well as could be used for natural ventilation, that even gave a better energy demand.

	BE 18 energy calculation
Information	Area: 930 m2 Heatcapaity: 70 Wh/ K m2
1. iteration	53,6 kWh / m2 year
2. iteration	New window iteration 45 kWh / m2 year
3. iteration	Worked with window placement 40,3 kWh / m2 year
4. iteration	New windows data value 39,3 kWh / m2 year
5. iteration	Worked with natural and mechanical ventilation 26,6 kWh / m2 year
6. iteration	Added new window in hotelroom because low light 29,4 kWh / m2 year
7. iteration	Added ekstra ventilation through new windows 21,5 kWh / m2 year

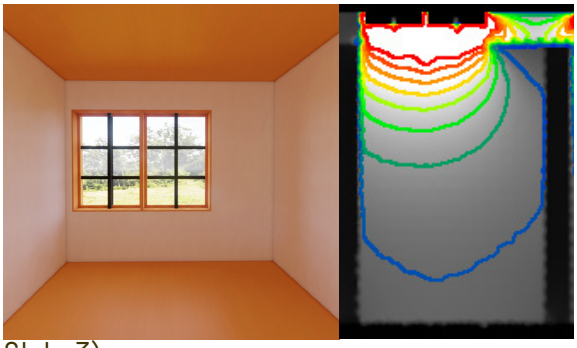
Illu. 118. Energy demand investigation



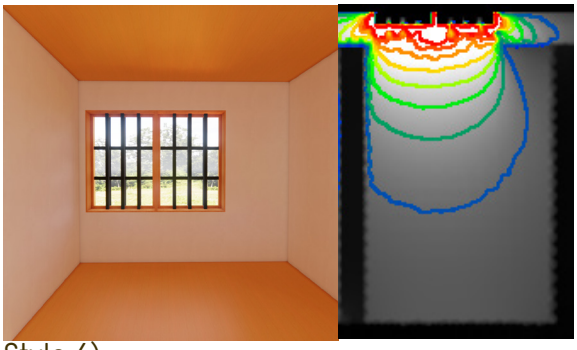
Style 1)



Style 2)



Style 3)



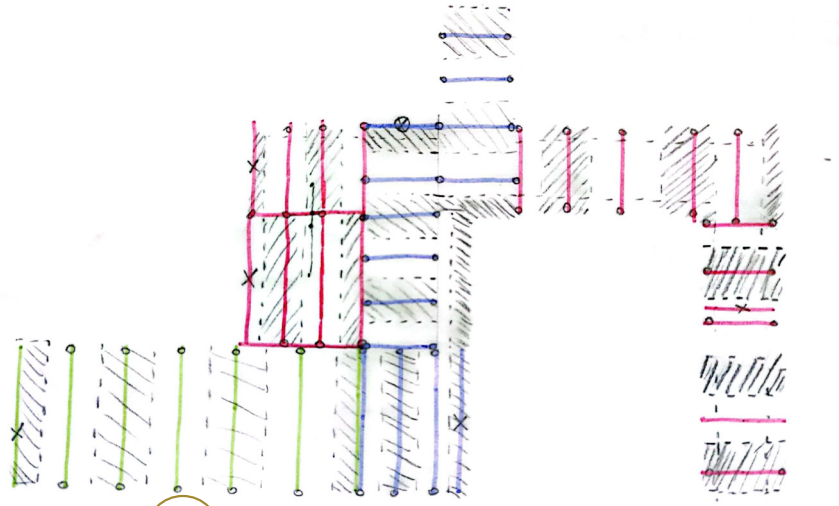
Style 4)

Illu. 119. Investigation of window style in relation to aesthetics and daylight

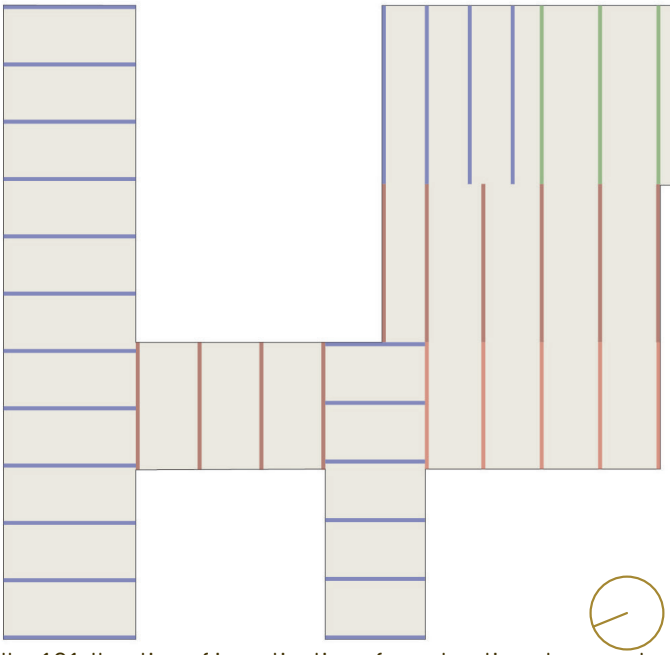
4.4 Design phase 3

Construction placement and calculation

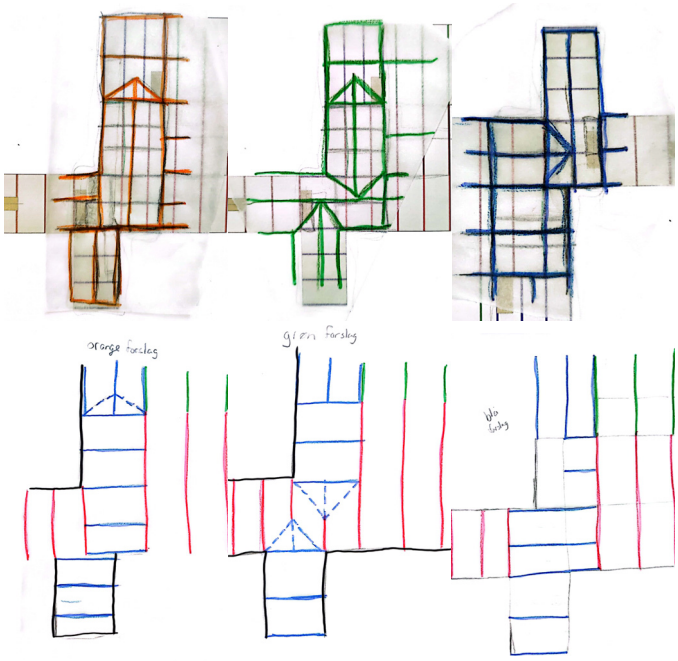
In the “design process 2”-part, the construction shape/design was found. To get a better idea of the size of the construction and what forces it can take, the placement was needed to be found first.
As shown in illustrations 123, the placement has moved a lot in relation to the roof slope.



Illu. 120. Iteration of investigation of construction placement



Illu. 121. Iteration of investigation of construction placement



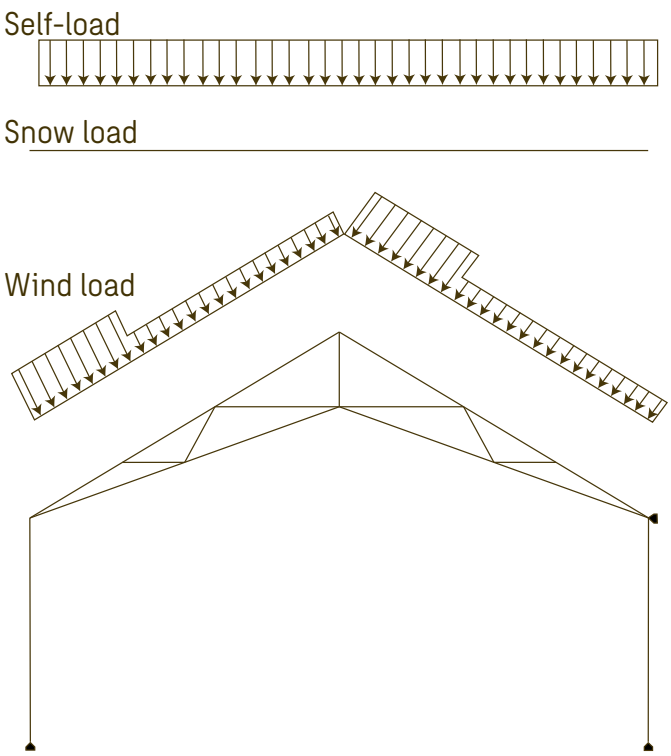
Illu. 122. Iteration of investigation of construction placement in relation to roof slope and shape

4.4 Design phase 3

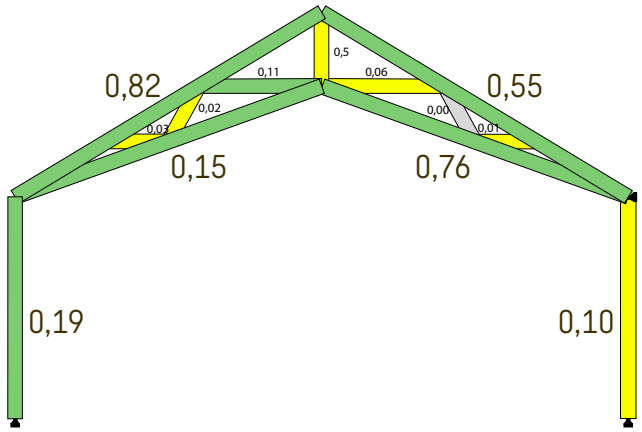
Construction placement and calculation

When a placement was chosen, the calculations could begin. Here were used Robot and tested many different sizes. The construction would aesthetically look best with the same dimension on the elements, so the utilisation was calculated on the various elements to ensure the construction was not overloaded.
Even though there were four different constructions, the load they had to carry was the same, so the one with the highest distance and most aesthetic impact was calculated.

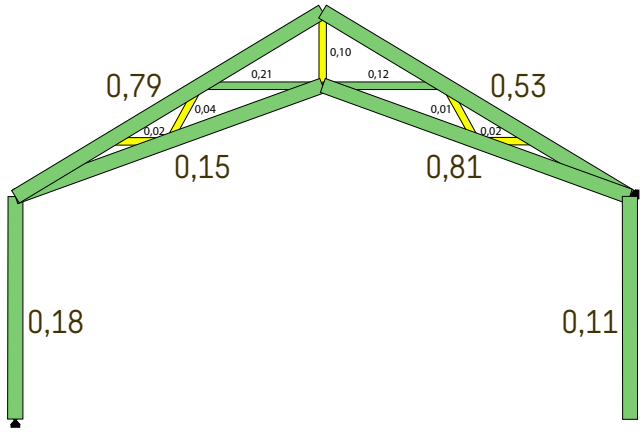
As can be seen in illustration 124, the structure in the restaurant was calculated.
This gave a dimension of 200x100 mm that will be applied to all constructions. The interior elements can be a smaller section because their utilisation is under 10%. This was iterated on, and the best option can be seen in illustration 125.
The other iterations can be seen in appendix 1.5-1.7



Illu. 123. Static system of construction



Illu. 124. Case with all elements same size



Illu. 125. Case with element in between smaller


Illu. 126. Existing construction on site


Illu. 127. Existing construction on site

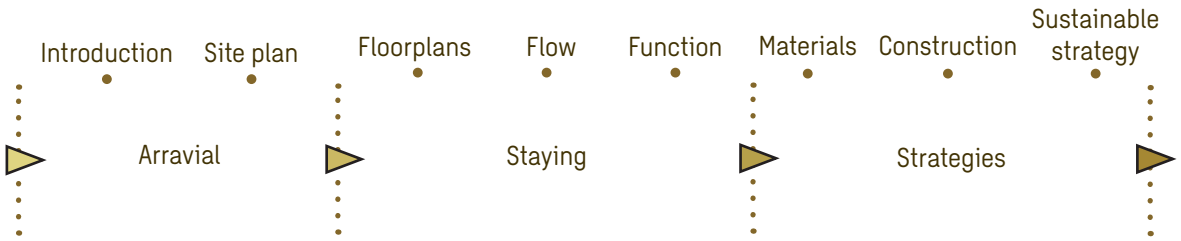
4.5 Partial conclusion

In this chapter, the generator “Sustainable” was investigated. The different LCA results are used to define façade materials, where there was chosen burned and untreated wood because of the LCA results and for aesthetic reasons. The existing wall will be used as coastal protection.
The building uses passive strategies through natural ventilation and solar heat. To this, different windows were investigated in relation to aesthetics and daylight. Indoor temperatures were also calculated to ensure
Lastly, the construction was iterated on, finding the right placement in the building related to roofing design and atmosphere. When a design was found, the needed size was calculated in relation to what was possible and what would aesthetically look good.

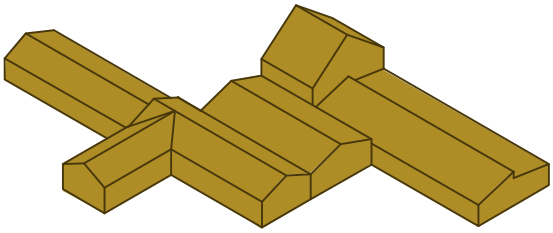
Illu. 128. Atmospheric picture of Samsø

5.0 Envision

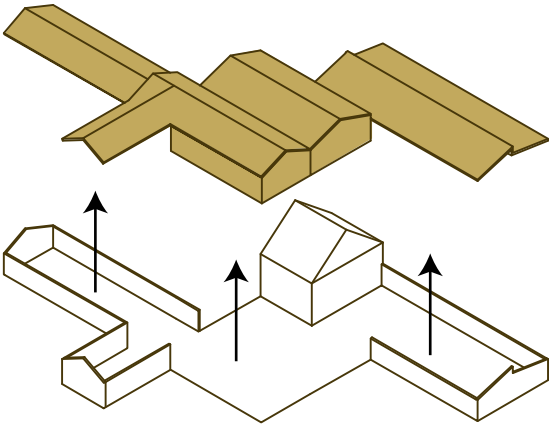
In this chapter, the final design will be presented. It summarises the process that has happened in with the three generators. The site's final design will be visualised in relation to nature and outdoor functions. The chapter will also visualise the hotel's interior in both plans, sections and visualisations. The flow of guests around the hotel is shown. The hotel has used sustainable strategies that will be visualised, together with other strategies/demands the hotel has undergone. The construction principle will be shown together with the material choices of the hotel. The energy demand has been calculated to find the energy frame for the hotel.



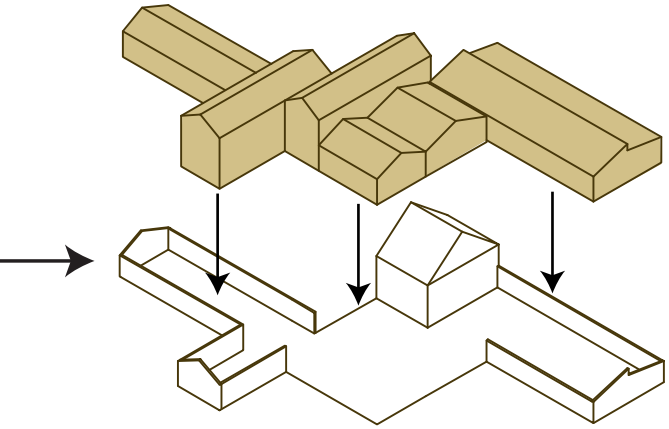
5.1 Concept development



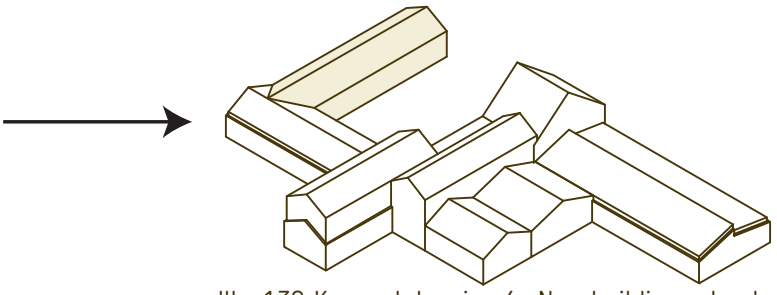
Illu. 129. Koncept drawing 1 - Exsisting building on site



Illu. 130. Koncept drawing 2 - Keep reuse potential



Illu. 131. Koncept drawing 3 - New Interior



Illu. 132. Koncept drawing 4 - New building extended

5.2 Samsø beach hotel

Peacefully located in the middle of Sælvig bay between trees and meadows is Sælvig Strandhotel. This place has previously been an old industrial site belonging to Sælvig cement factory, which for more than 100 years has their daily activities at this place and completely removed all previous traces of the former nature that were on the site with material storage and industrial driving and thereby creating an eyesore in the landscape. This now belongs to the past with Sælvig badehotel, which would let the past be erased and let nature regain its place in a symbiosis relationship between man and nature, new and old and relaxation and activities on the plot and thereby create a harmonious site filled with life in all shapes and sizes. Therefore, the goal of Sælvig badehotel is to create a unique gathering point right in the middle of Samsøs west coast, where both young and old, as well as locals and tourists. Here they can meet and enjoy a good meal of local ingredients from local producers while the sun goes down over the water and stars slowly emerge over Sælvig bay; all the while, stories are exchanged, and new acquaintances are made to the sound of waves on beaches and glasses being toasted.

Illu. 133. Facade section east

5.3 Facade east

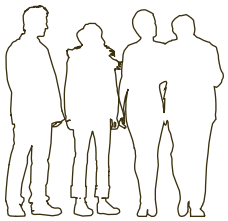
The east facade is the first thing you will meet when you come to Sælvig beach hotel; in the middle is the viewing tower giving stunning views over Sælvig bay. The parking is hidden away in between the dunes on the left, and on the other side, hidden a little bit, the entry in the courtyard busing with life

5.4 Persona

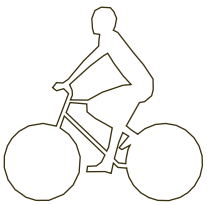
At first, the hotel may seem busy with guess and locals from all over the island there coming to relax and enjoy the water and food there, but when Coming inside Sælvig beach hotel, you will receive of the staff who is working all over the hotel, making sure everything is running smoothly so you can relax and enjoy your time exactly as the other couples and friend groups that are staying at the hotel.

Illu. 135. Persona - Hotel guest

Illu. 137. Persona - Restaurant guest



Illu. 136. Persona - Group hotel guests



Illu. 138. Persona - Rental guest

Illu. 134. Persona - Hotel staff

Illu. 139. Facade section west

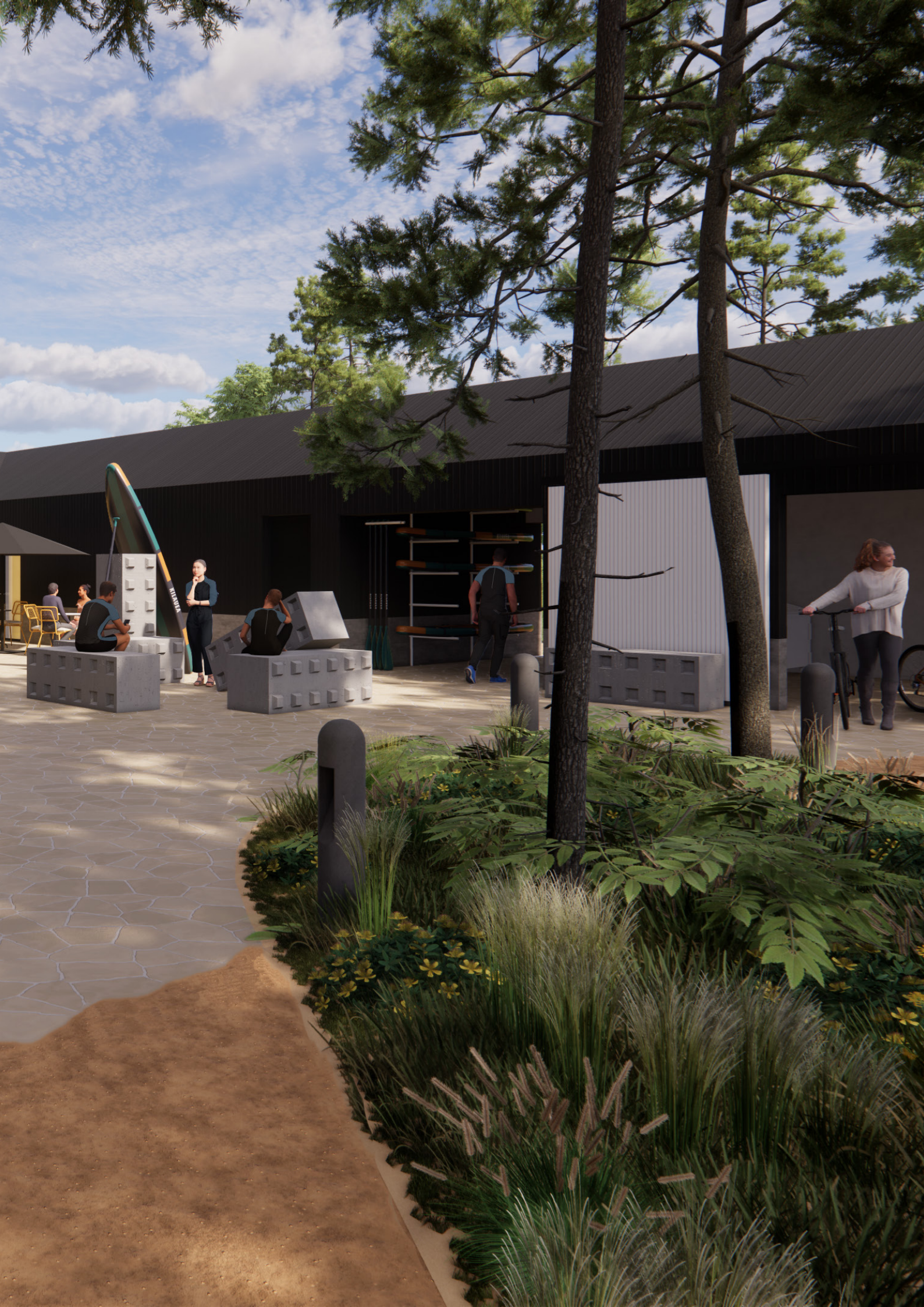
5.5 Facade west

When walking on the beach, Sælvig beach hotel is slowly coming into view. Here is seen the west façade. Here life is lived to one's fullest from people out on the water enjoying its cold refreshing touch, while others have a good time dining in between the dunes.

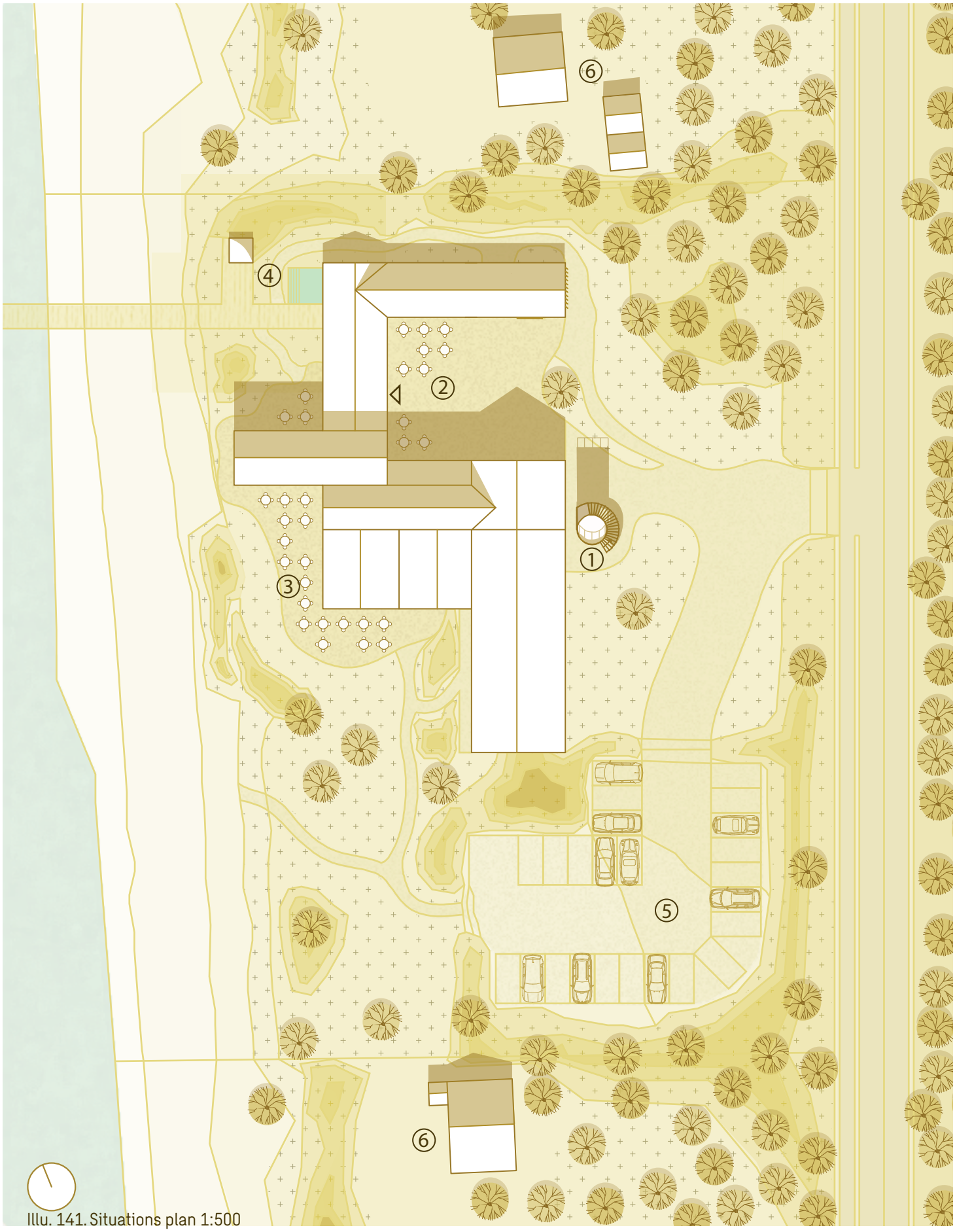
Arravial

Arrival to Sælvig Beachhotel, you will be met with alot of activites in the courtyard, from people on their way to explore Samsø from both water and land side and people getting their morning coffe while enjoying the sun.

Illu. 140. Rendering of courtyard



5.6 Site plan



Illu. 141. Situations plan 1:500

5.6 Site plan

When the site first is met from the driveway, the old water tower is met. It has been transformed into a lookout tower (1) with a view of Sælvig bay. The next is the courtyard (2) that leads into the hotel.
The surrounding area consists of forest-like vegetation, so to blend the site into the context, forest-like nature has been established on the east side, with the densest near the neighbours (6). There is parking (5) hidden by vegetation and terrain differences that blends into meadow vegetation towards the water on the south side. The nature on the west side of the building is high grass with small bushes and trees that matches the meadows around to follow the regulation of restoring nature. The terrain has dunes to help guide the water at the occasional floods of the site into the parking lot that works as a water reservoir when it happens.
Near the hotel, there is a chance in the ground material to indicate the terrace beginning. The terrace is located on the south (3), west and east (2) side of the hotel to ensure sun on a terrace all day long. On the hotel's northwest side, the outdoor spa (4) is located with an outdoor sauna and pool. The spa also has a wooden walkway down to the beach to help with the connection between the spa and beach that should both be used for a complete spa-experience.

1) Lookout tower
2) Courtyard
3) Terraces
4) Outdoor spa
5) Parking with space for 24 cars
6) Neighboor houses and cottages

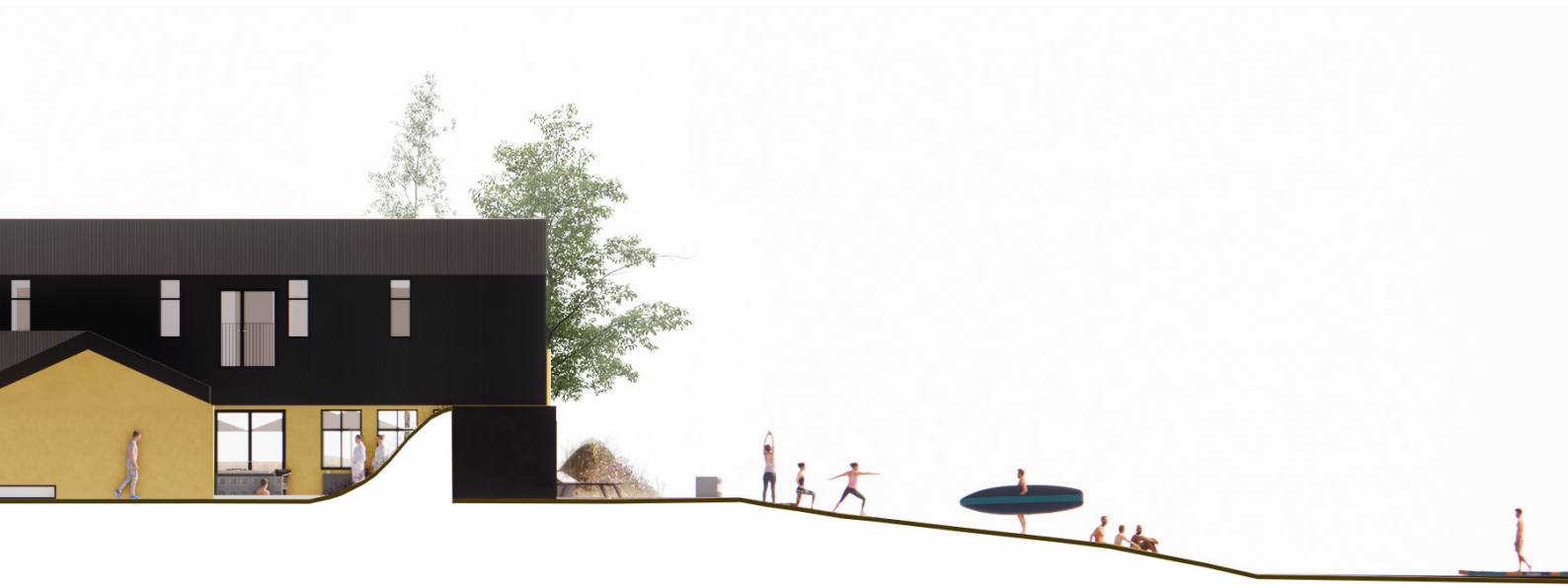
5.7 Facade north and south

The North facade: When in the spa sitting down in one of the pools looking out from the ground level windows out to the vegetation, don't be surprised when suddenly there are some movements from people walking by with equipment for kayaking or SUP. On the other side, by the south façade, you can walk from your bike down the path in between nature where old traces from what was before can be found while deciding to either continue down to the beach or turn and go to the restaurant and enjoy food from around the island.

Illu. 142. Facade section north

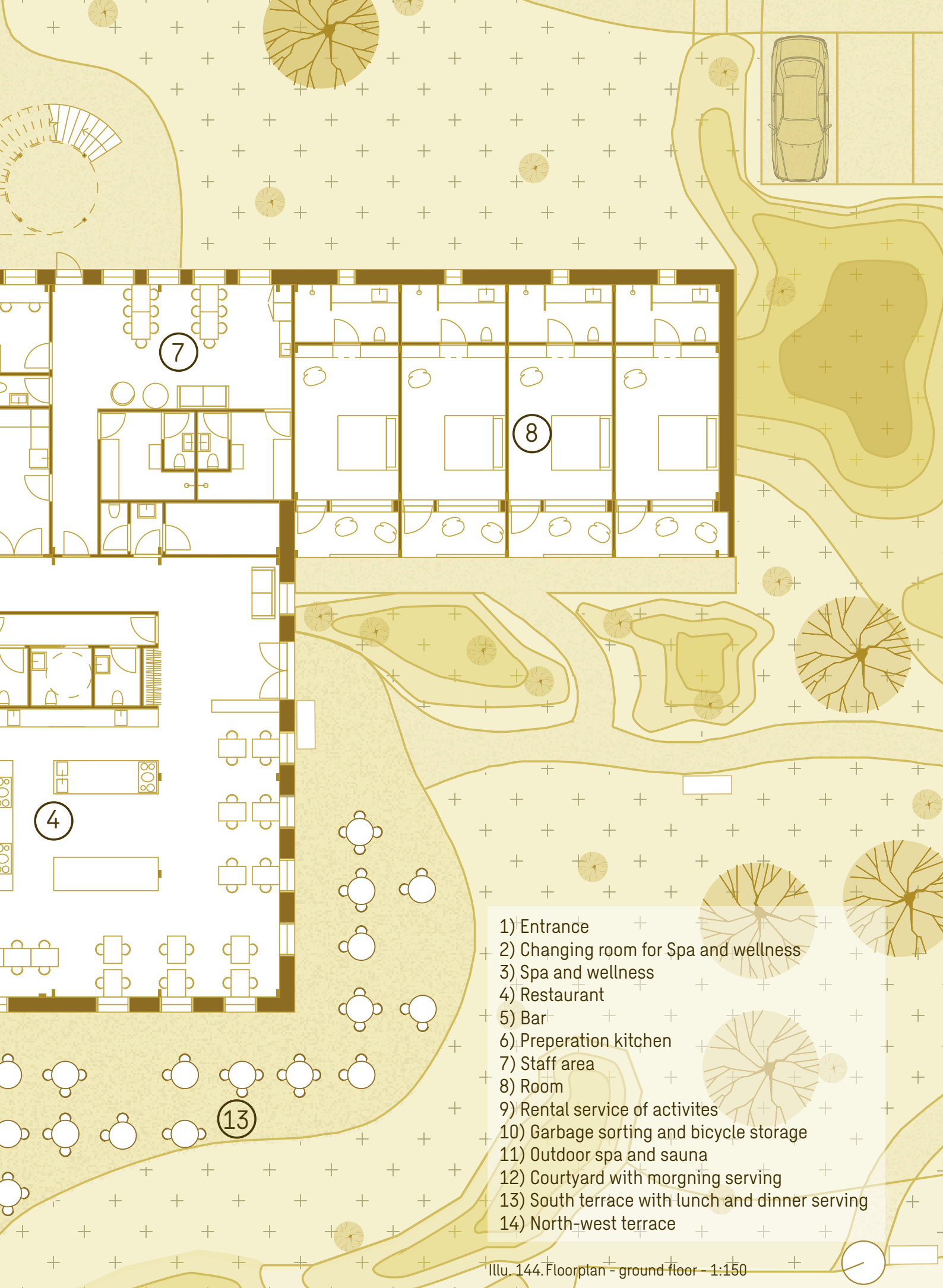
Illu. 143. Facade section south

5.7 Facade north and south



5.8 Floor plan

Ground floor



1) Entrance
2) Changing room for Spa and wellness
3) Spa and wellness
4) Restaurant
5) Bar
6) Preperation kitchen
7) Staff area
8) Room
9) Rental service of activites
10) Garbage sorting and bicycle storage
11) Outdoor spa and sauna
12) Courtyard with morgning serving
13) South terrace with lunch and dinner serving
14) North-west terrace

Illu. 144. Floorplan - ground floor - 1:150

5.9 Daylight

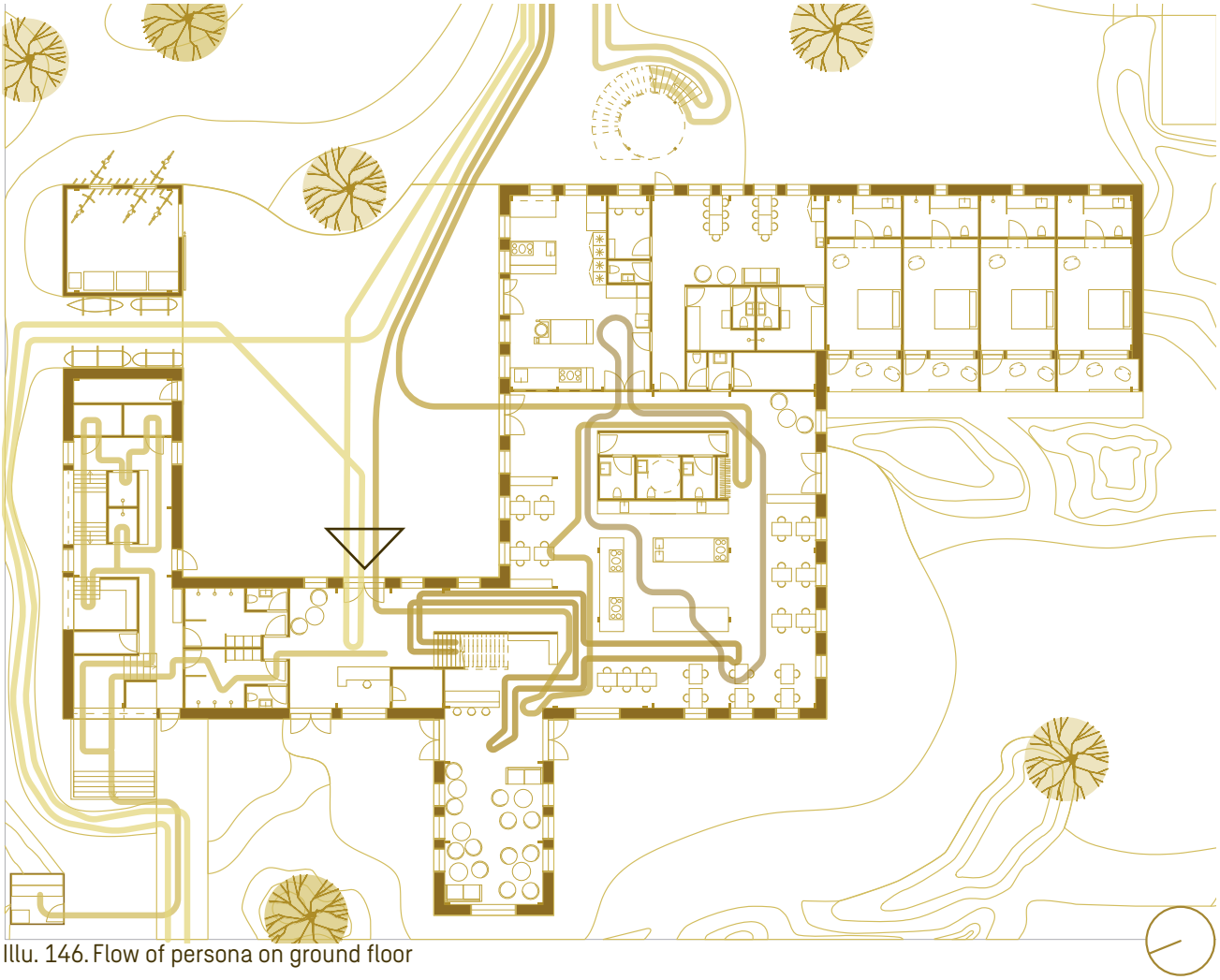
To ensure the hotel is well lit up and has plenty of natural light, the daylight factor was checked through the Velux visualizer. There is some dark spot on the illustration, but these are bathroom core and changing rooms to the spa that don't have windows. The average of the hotel is 2,5 % on 03/03 at 12:00 pm. The guide is that the daylight should have over 2 % in half of the room (BR15, 2017); this ensures the hotel has enough natural daylight inside to be a good workspace and hotel experience.

Illu. 145. Daylight factore from Velux Visualizer

5.10 Flow through the day

Day flow

Throughout the hotel, there are areas that only some users must use. The daily flow of the different users is tried to divide out in the hotel, so the places they cross are focused around the areas with space for people.
Illustration 147 shows that the flow primarily crosses at the entrance and staircase. The flow inside the restaurant is higher during dinner time than the rest of the day. There is both guest, server and plates going around the restaurant at mealtime.



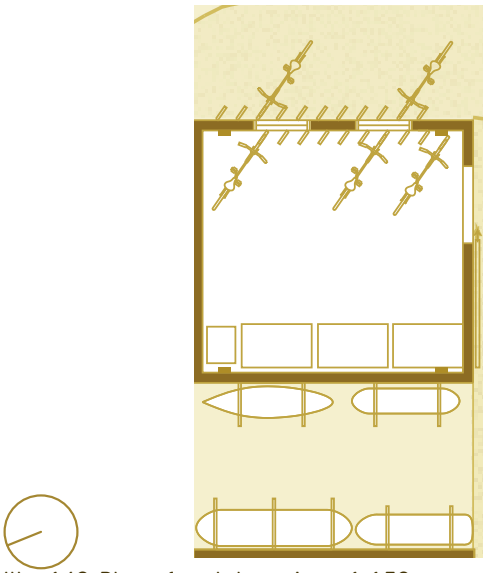
Illu. 146. Flow of persona on ground floor

5.11 Functions

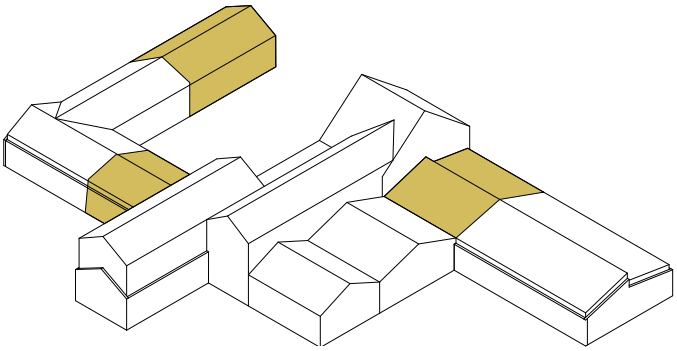
Staff

The staff area is next to the preparation kitchen with a view of the nature towards east. The staff area has two changing rooms to ensure staff can change into uniforms and wetsuits if teaching water activities. The room also has a staff lounge so the employees can relax and chat together.
There is also an office, as well as access to the outdoor so the staff can arrive without having to go through the hotel. The staff lounge also has high ceilings with a vertical skylight toward the east that ensure plenty of light into the lounge.

The entrance is located at the bottom of the courtyard, with big windows and doors which invite the guests inside. The first thing the guest meets is the beach's view since the opposite wall has a big window behind the reception. There is access to the first floor and the majority of hotel rooms from the entrance. The entrance has the changing room to the spa to the right, while the restaurants and bar area are located to the left.



Illu. 149. Plan of rental service - 1:150



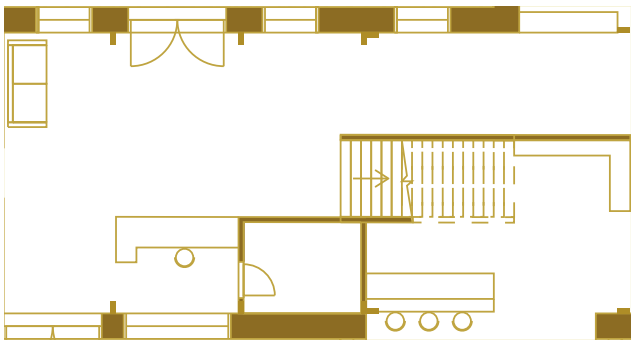
Illu. 147. Isomatri of placement of function

Illu. 150. Atmosphere picture of rental service

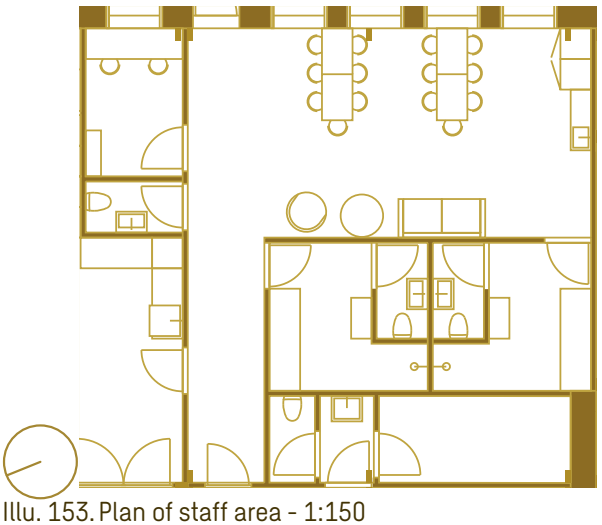
Illu. 148. Section through hotel south to north - 1:200

5.11 Functions

Staff



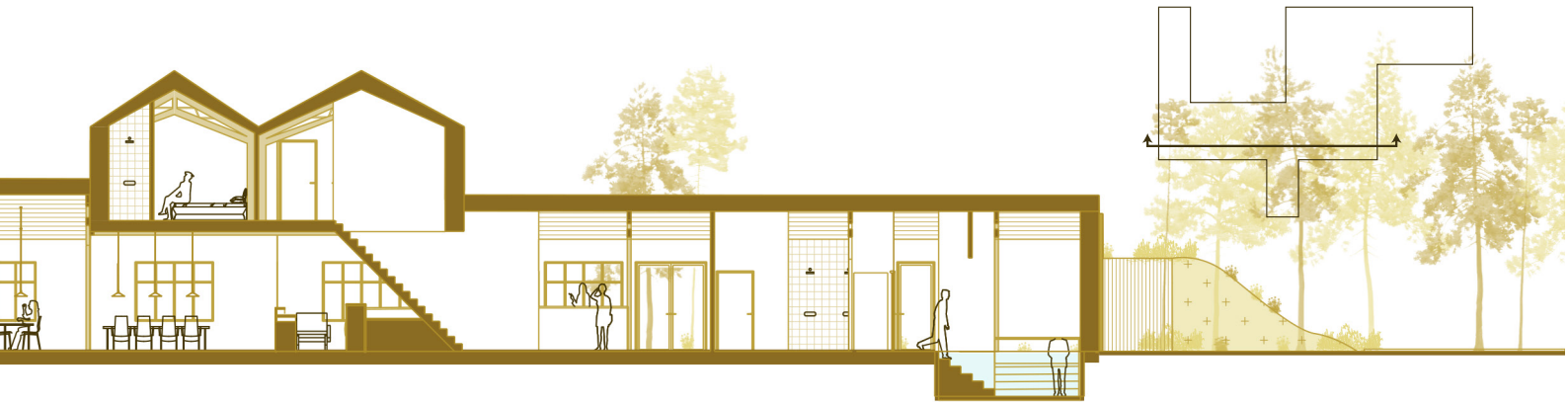
Illu. 151. Plan of entrance - 1:150



Illu. 153. Plan of staff area - 1:150

Illu. 152. Atmosphere picture of entrance

Illu. 154. Atmosphere picture of staff area



Dinner in the restaurant

When dinner time comes, the restaurant get filled with delecias smells from the food of Samsø that gets prepared by the cook. The tables get filled, while glasses cling and the view of nature is adored/cherish/admired.

Illu. 155. Render of restaurant

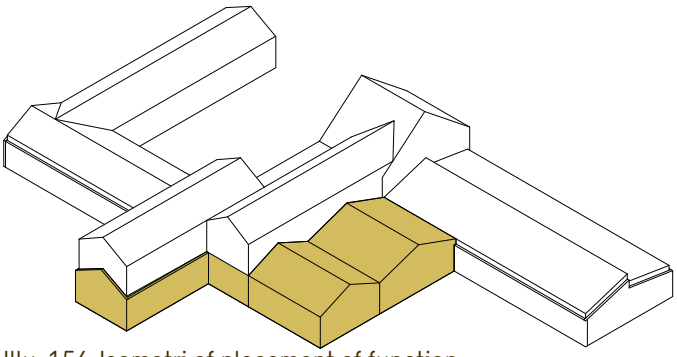
5.12 Functions

Restaurant and kitchen

The restaurant has space for 38 people inside, but there will also be able to sit outside on the terraces around the hotel that each have a prime spot for the sun throughout the day. The restaurant has a kitchen in the middle allowing all seats to see the cook and have the gastronomic experience.
The tables are all standing along the exterior wall to give space for the kitchen, but it also allows the tables to have a view of nature and the beach outside while being sheltered from the environment. Behind the restaurant, the bar lounge is to be found. Here the bar is first as it also serves the restaurant with beverages. The lounge has casual furniture in the form of sofas and armchairs, while the restaurant has typical table and chairs for two.

Illu. 158. Atmospheric picture of restaurant

In the opposite corner of the bar is the preparation kitchen is located. The preparation kitchen is where the cooks make the food that needs a long time on the stove or oven. It is also here the preparation for the food that shall be used later, like cutting vegetables.

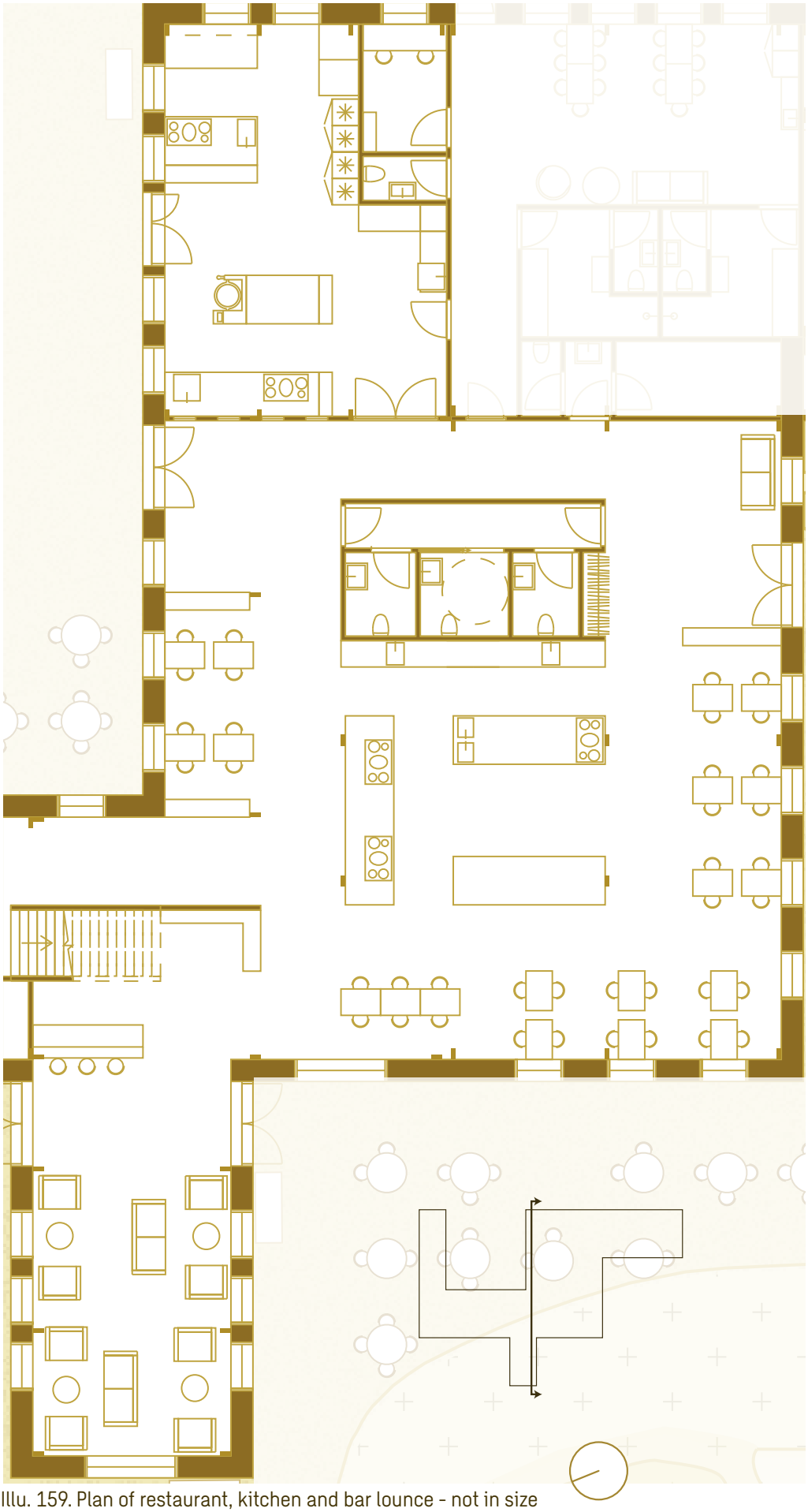


Illu. 156. Isomatri of placement of function

Illu. 157. Cross section west to east- 1:200

5.12 Functions

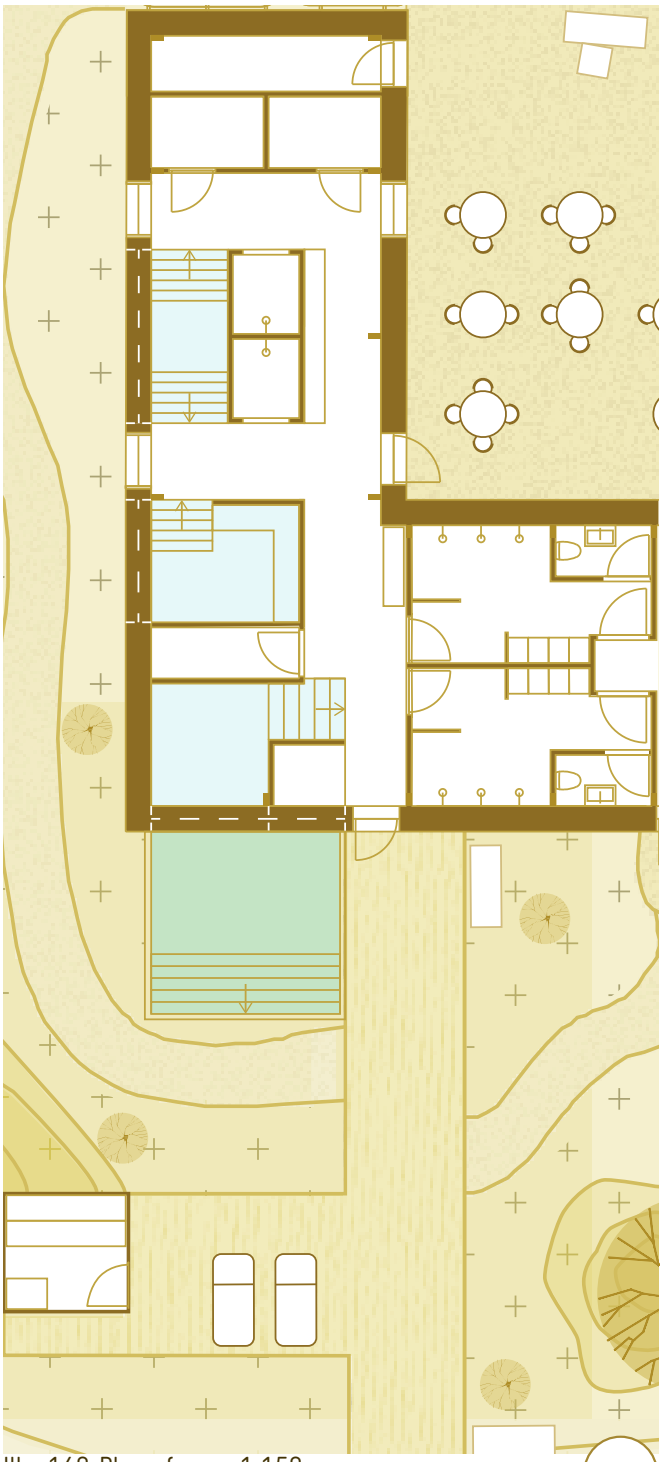
Restaurant and kitchen



Illu. 159. Plan of restaurant, kitchen and bar lounce - not in size

5.13 Functions

Spa and wellness

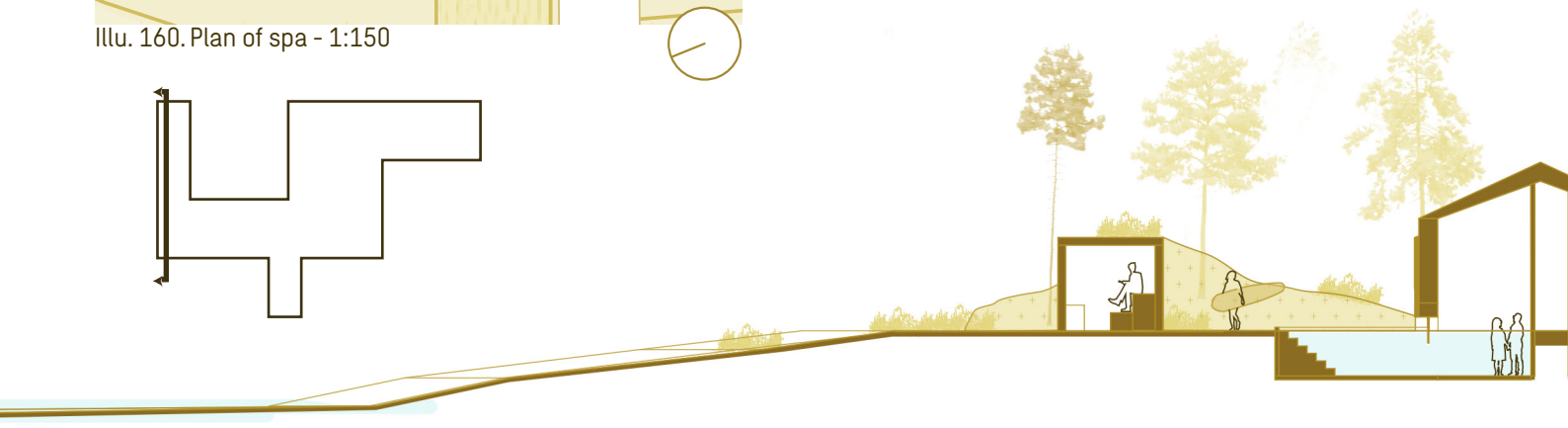


Illu. 160. Plan of spa - 1:150

When having entered the spa area through the changing rooms, the first thing a person is meeting is the choice of going down the hot water pool, going into the experience showers or starting the circle of going through a fire and ice experience. There are also the options of steam baths, with added beneficial oils.

When entering the hot water pool, the first to notice is the change in materials since the bath uses one of the old concrete mixing tubs. From the pool, there is the option to go into a cave with a view, as can be seen in illustration 163. There is also the option to swim outside and be in warm water or go out to try the beach water that can be seen from inside.

On the opposite end is the more experimental spa experiences. There are options of a fire pool, cold walk pool, cold water shower, and a mammoth shower. As mentioned before, the steam baths are also here, with two different experiences.
The spa has visible constructions that go to the top of the slop. As well as many small windows in eye height when down in the pool. There are also normal windows to ensure light comes into the spa.

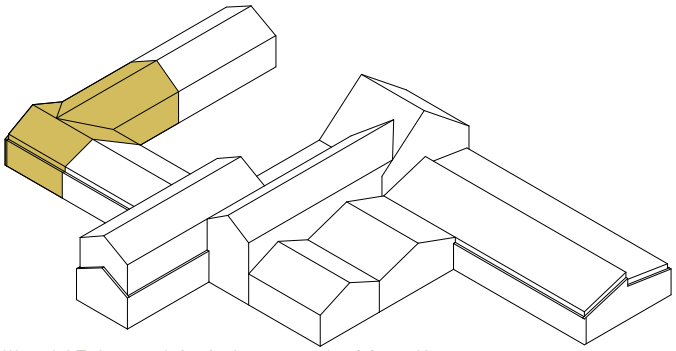


Illu. 161. Section through spa east to west - 1:200

5.13 Functions

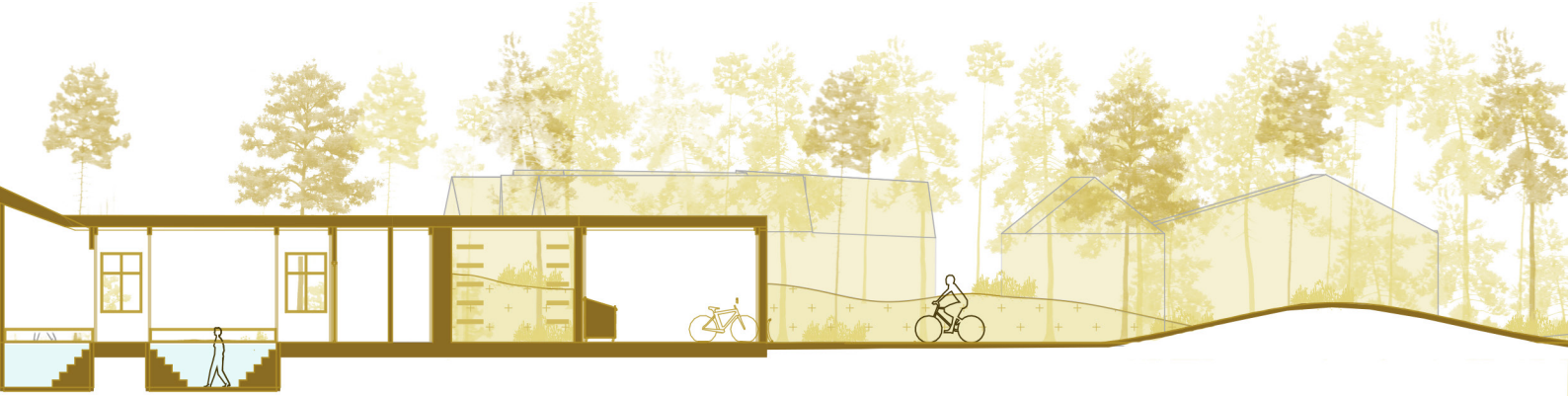
Spa and wellness

Illu. 162. Atmospheric picture of spa in hotwater pool



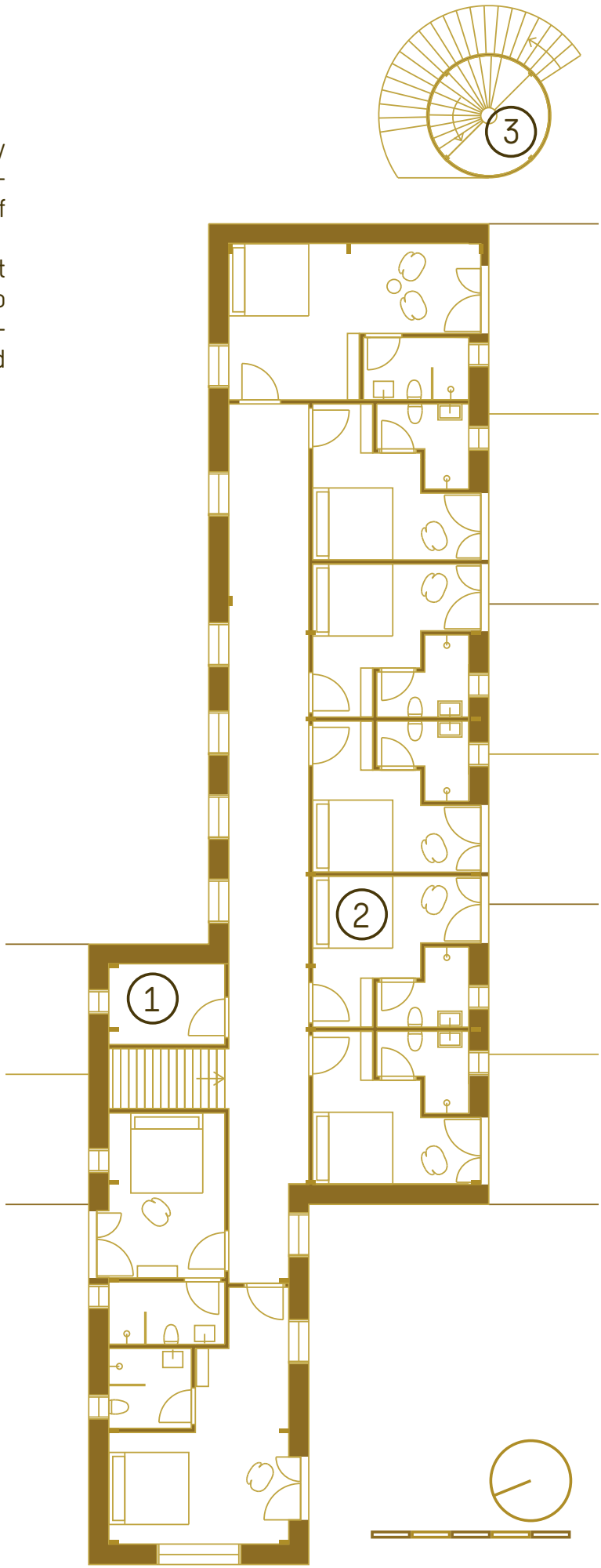
Illu. 163. Isomatri of placement of function

Illu. 164. Atmospheric picture of outdoor spa



5.14 Floor plan first floor

On the first floor, there are the hotel rooms. They are placed along a hallway with visible construction running perpendicular to the way of the hallway.
Along one side are windows allowing daylight and nature into the hallway. The hallway also has a storage room for cleaning supplies to ensure easy workflow for the staff. The hallway led to 8 rooms that will be described later.



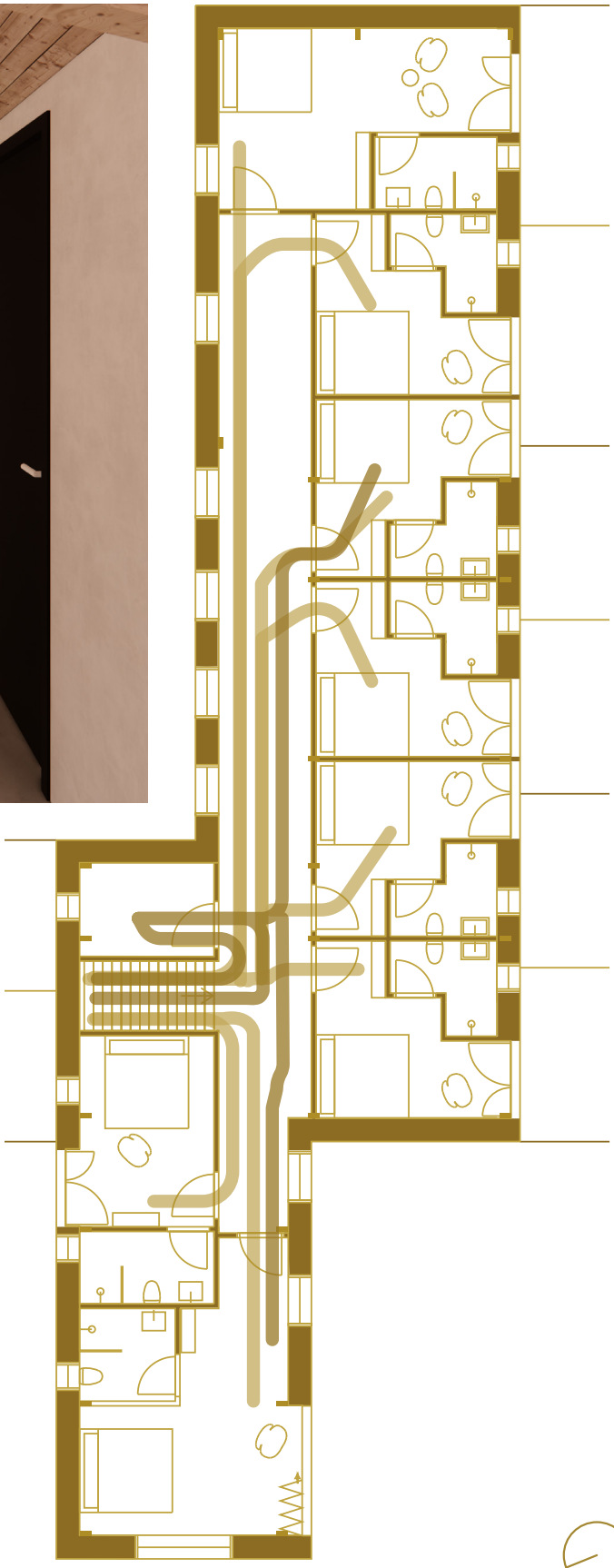
1) Cleaning room for first floor
2) rooms
3) Lookout tower

Illu. 165. Plan of first floor - 1:150

5.15 Flow on first floor

Illu. 166. Atmospheric picture of roomhallway

The flow on the second floor is primarily hotel guests and the occasional cleaning staff since the regular guest only uses the ground floor functions.



Flow hotel guest

Flow staff

Illu. 167. Flow of persona on first floor - not in size

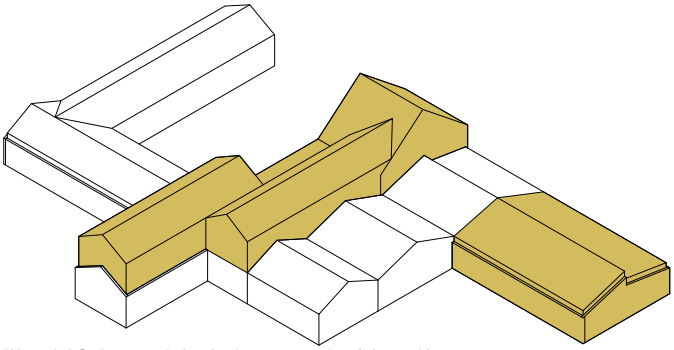
5.16 Functions

Rooms

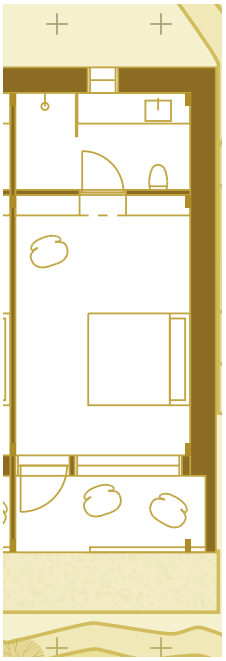
The hotel has 12 rooms differencing in five sizes. All rooms have the same material, but different placings and dimensions, and the ceiling pitch goes in different directions. They all have high ceilings with visible construction in the walls.

The four rooms on the ground floor are 24,3 m2 with covered terraces toward the west. the room has a water view through the terrace, with a big bathroom on the opposite side of the room. The room has high ceilings with a vertical skylight toward the east that lets plenty of light in as well as ensures easy natural ventilation of the room.

The five smallest rooms are on the first floor and are 15,4 m2 with a French balcony toward the south. This ensures a water look from all five rooms. The room has a French door and a window in the bathroom, enabling two-sided ventilation.
The big room toward the east has a French balcony toward the south. The room is 24 m2, with a bathroom along the inner wall. The room goes all the way through the building, so it is one of the few with windows on both sides that helps with natural ventilation.



Illu. 168. Isomatri of placement of function



Illu. 169. Plan of ground floor room 24,3 m2 - 1:150

Illu. 170. Atmospheric picture of ground floor room

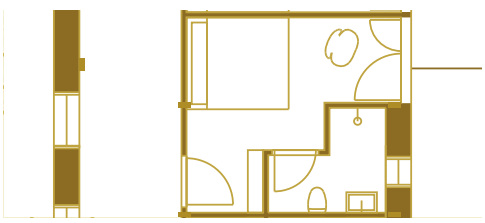
5.16 Functions

Rooms

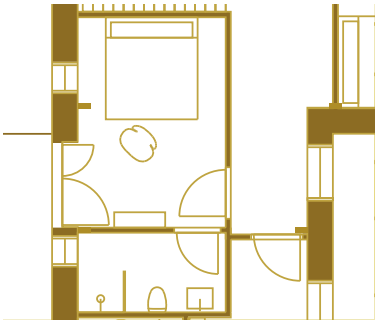
Illu. 171. Atmospheric picture of second floor room

On the opposite side of the first floor is the second big room, which is 24,3 m2 with a French balcony with a lot of space interior for lounge chairs. The rooms also have a big window on the west side of the room toward the bay.
Lastly, the last room is 17,3 m2 with a French balcony toward the northwest and plenty of water look and forest nature.
The five different rooms can be seen in illustrations 166 and 169 to 172.

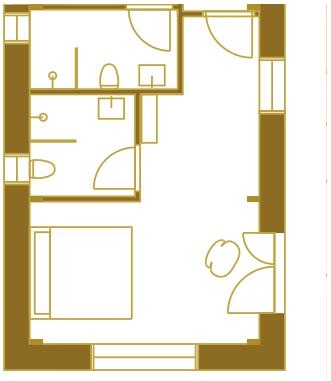
Illu. 172. East room first floor 24,0 m2 - 1:150



Illu. 173. Small room first floor 15,4 m2 - 1:150



Illu. 174. North room first floor 17,3 m2 - 1:150



Illu. 175. West room first floor 24,3 m2 - 1:150

SUP boarding in the morning

The early birds can get a quick relaxing dip in the water or yoga on the beach before starting their day, while the staff get the hotel ready for todays activites.

Illu. 176. Render of water view of site

5.17 Materials

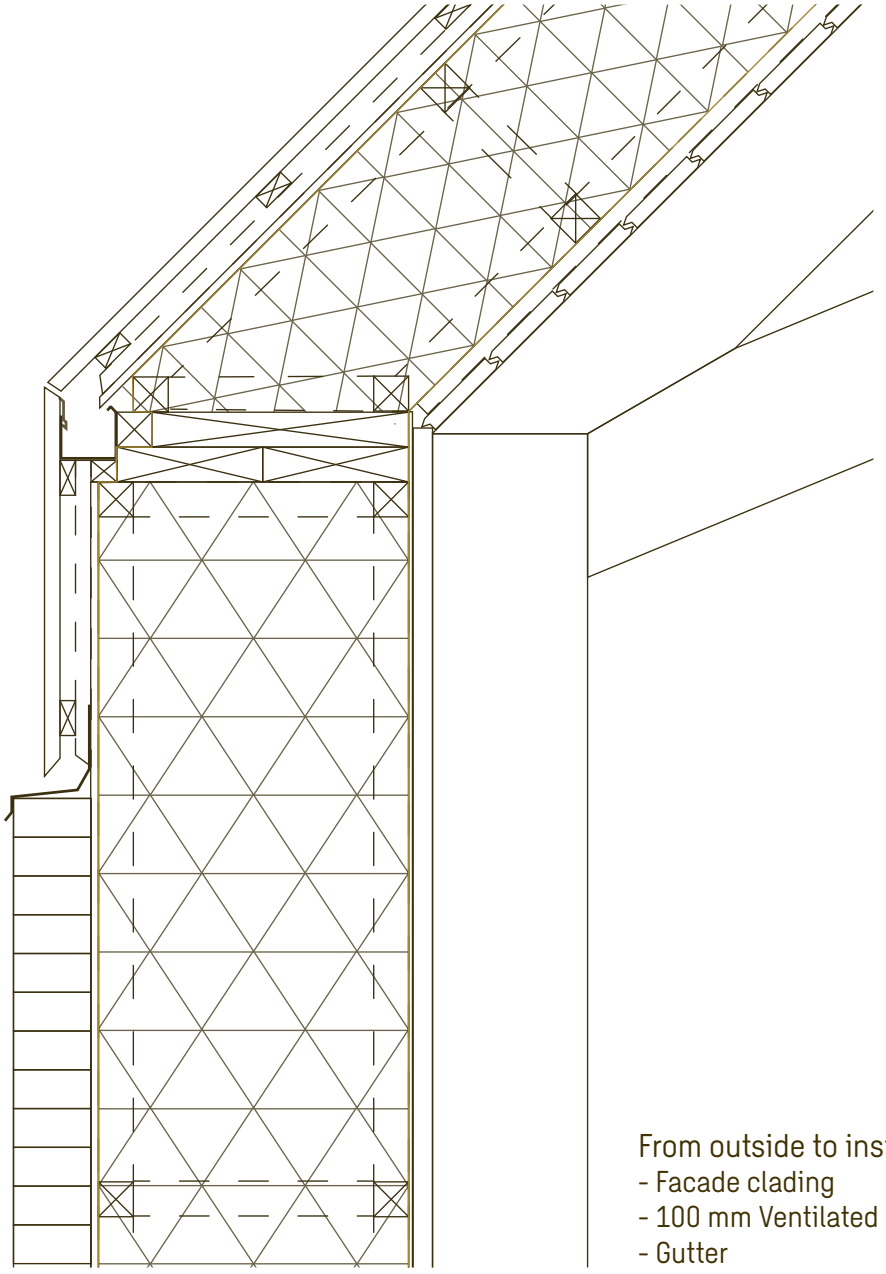
The design has a split façade in relation to the coastal protection of the building. In the places where the original building is, the original façade works as the water barrier, but in the new buildings, the protection consists of concrete. As mentioned in the design guide, the façade behind the original wall shall pop up in contrasting colours and therefore have black burned wood as façade cladding. On the new barrier, there is mainly an untreated wood as a façade cladding. Except where the façade is going the two floors up, the façade is also burnt wood to work as a middle ground between the two façade principles. In the original building, the façade is kept as it is.
The window and door frames are in black to “stand out “and stage the view from inside.

The outer wall is made with a hidden gutter behind the façade. The insulation is made of straw which is a biogen material and something that is being grown on Samsø. As shown in illustration 179, the wall consists of two façade claddings, a wind barrier before the 400 mm insolation element, and interior cladding of clay plaster.
Inside, the materials have a calmer atmosphere, with more toned-down tones to calm the wood material found around the building. The walls consist of light clay plaster, while the ceiling is horizontal wood-boards. The ground floor has concrete flooring to keep it easy to clean from the people coming outside and in the kitchen. The first floor has wood floors to give the rooms a warm atmosphere. The visible construction throughout the hotel is made in construction wood to stand out from the clay wall.

The kitchen elements are made of wood, with a lowered ceiling connected to the bathroom core behind, all made in plywood. The furniture is also made in wood, but another type than the rest. This makes the restaurant an area with a lot of wood, but it harmonises with the same colour scheme even though the wood is different.

In the hotel rooms, the walls have light clay plaster with wood floors and furniture in wood with luxury light beddings. All rooms have a black French balcony and black coloured fixtures in the bathroom.

Illu. 177. Collage of materials inside and outside



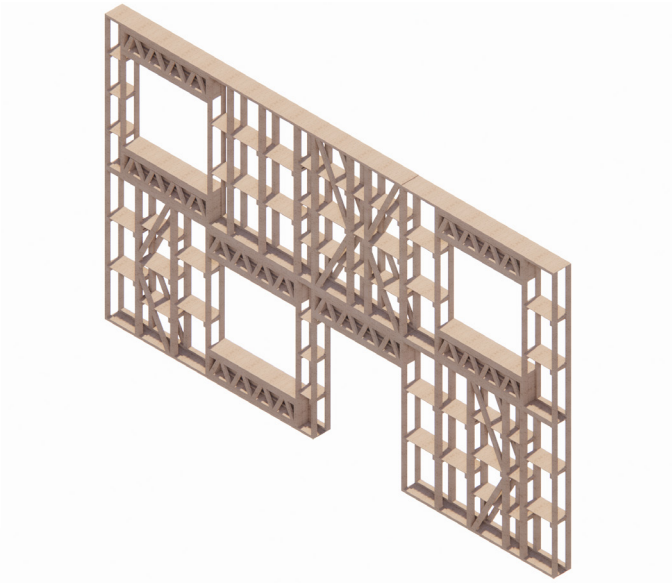
From outside to inside
- Facade clading
- 100 mm Ventilated gab with wood slats
- Gutter
- 10 mmWind barrier
- Airtight layer
- 400 mm Straw elements
- 5 mm wood board
- 20 mm clay plaster
- Visible construction

Illu. 178. Detail drawing of meeing between new and exsiting wall

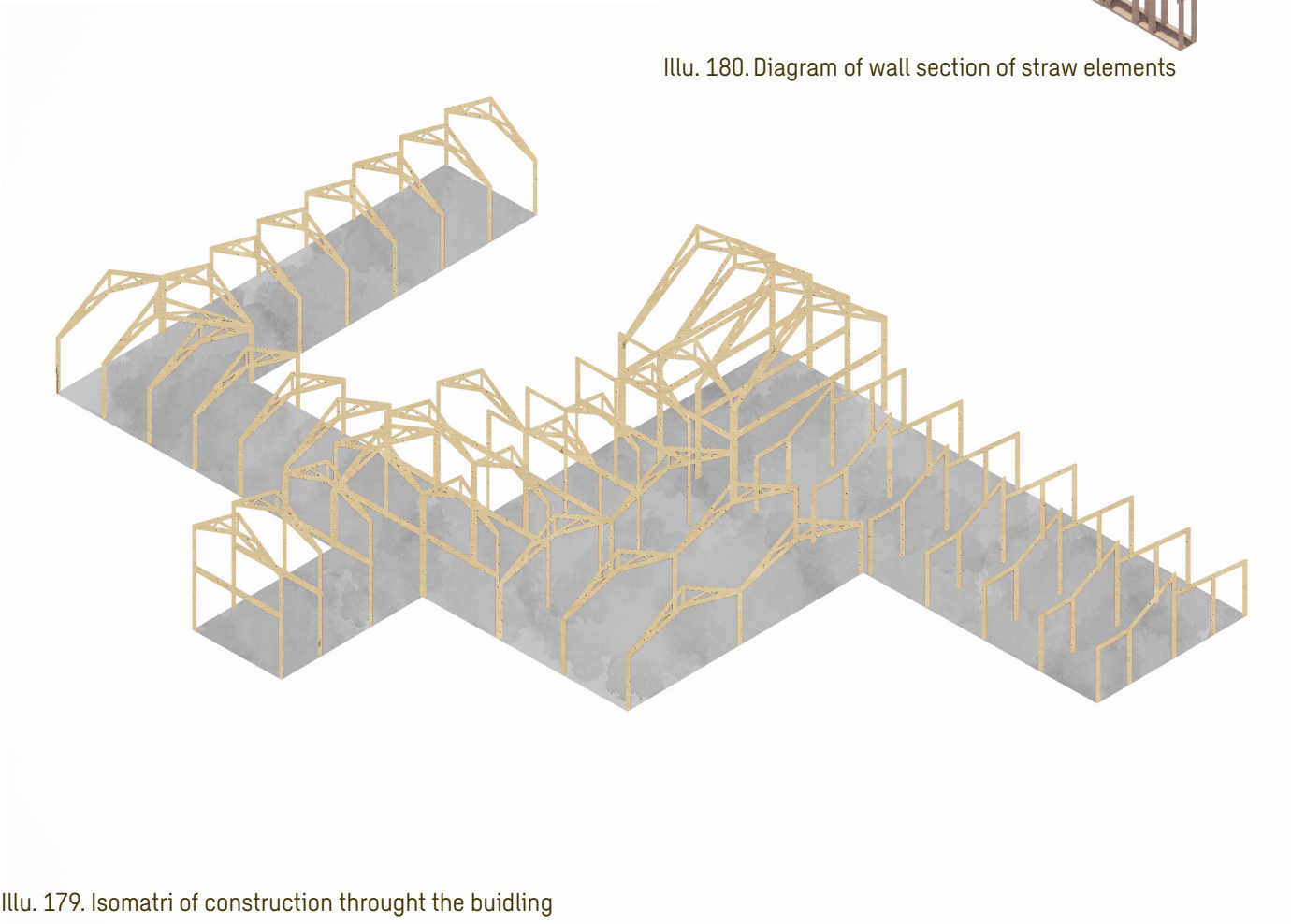
5.18 Construction

The hotel's walls are built up of straw elements. The elements are ordered to what of the pieces are needed. In illustration 181, a principle for the structure of the straw elements is shown. It shows how the elements will function when the wall needs a window or a door.

The load-bearing structure is made of wood, imitating the original structure of the existing building. The construction stands visible all through the hotel, with some places matching the walls, but then it will just be visible there.



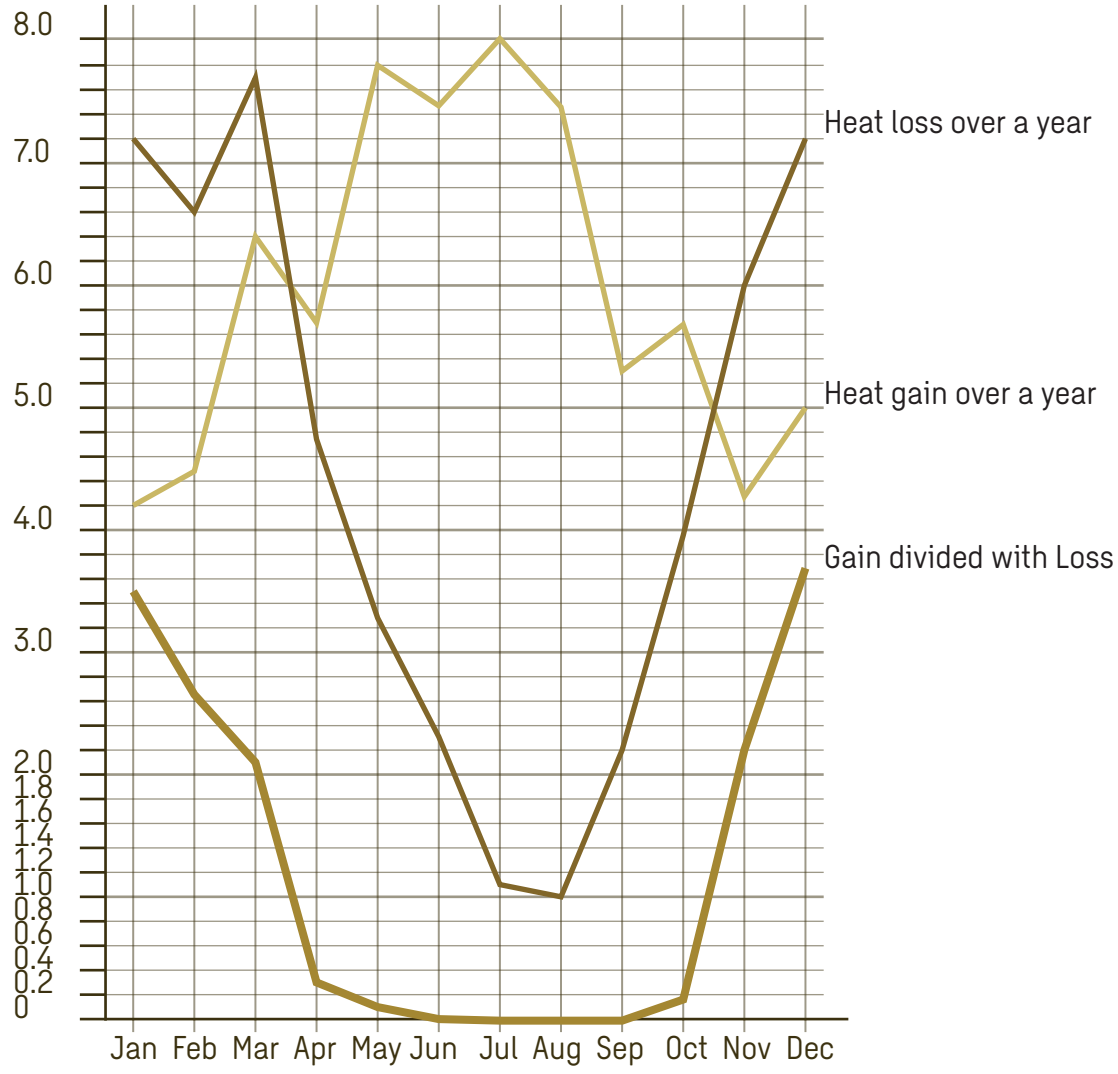
Illu. 180. Diagram of wall section of straw elements



Illu. 179. Isomatri of construction throught the buidling

5.19 Energy frame

The hotel has a thick wall with a lot of insulation that, as said in the sustainability, helps keep the hotel at a comfortable temperature. This has helped the energy calculations since there is less heat loss through the walls. The many windows with overhang have helped ensure winter solar heat into the building that keeps the temperature up and lowers the need for heating of the hotel in the cold month. The final calculation gave a result of 21.2 kWh/m2 year, which lies below the low energy framework of 27 kWh/m2 year.



Illu. 181. Graph of heat gain and loss through the year

5.20 Sustainability

Initiatives and passive strategies

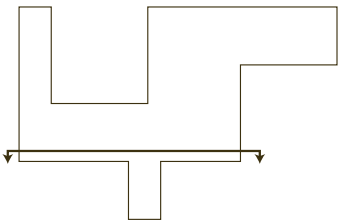
As investigated in the design process, the hotel has a lot of potential to use different strategies to help with the hotel's sustainability.
The hotel has social sustainability by ensuring year-round income from the business partners that deliver food or experiences to the hotel guests. The hotel draws people to a side of Samsø, where there are few available accommodation options, ensuring a flow of customers for the nearby road stalls.

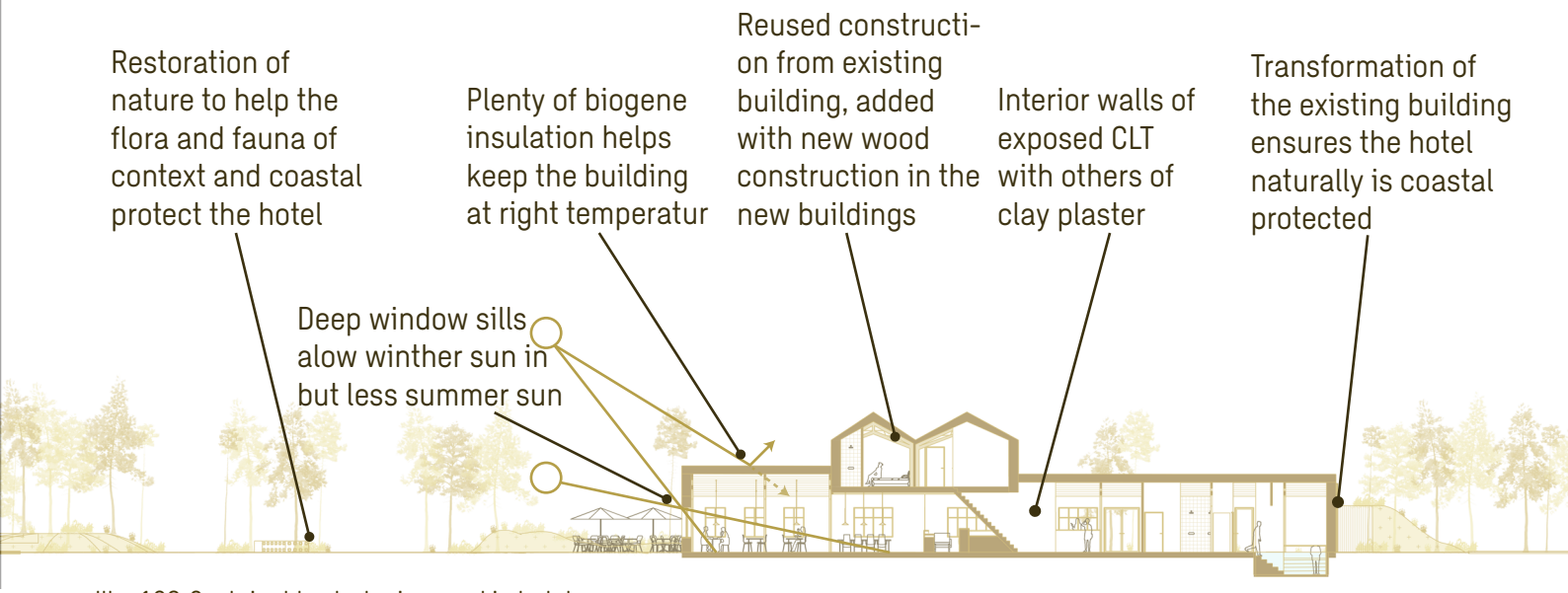
The hotel is environmentally sustainable by incorporating passive strategies and material choices. The hotel is transforming the existing building, only expanding when it gives more potential. The new materials that the hotel uses are natural materials, such as wood, clay and straw insulation.

Other wood from the existing building will be recycled to be used as decorations or benches in nature. An option was also to use some of the already cast concrete as benches. The materials that cannot be reused on-site will be able to be reused in other places in Samsø, such as the leca blocks.

The site is restored into the natural flora and fauna of the context as a meadow with paths and coastal protections in the form of dunes and low points thought the terrain. The site will also have some trees and bigger plants to help shelter from wind, but this is also natural to flora and fauna of the context.

The hotel uses passive strategies, as mentioned in illustration 183, but also natural ventilation in the form of both buoyancy and pressure ventilation.





Illu. 182. Sustainable strategies used in hotel

5.21 The hotel seasons

Throughout the year, the hotel's attraction changes along with the weather. In the winter season, the outdoor activities are limited, but the option of winter bathing from the spa is the main activity. Walks along the beach and exploration of Samsø are also something that can be done from the hotel's central location. The hotel still offers the option of an indoor spa, and the in-season foods are served at the restaurant, which is something that can draw people in. At night the option of star glazing is possible because of the location on Samsø and because the hotel is designed not to create too much light pollution.

At the beginning of spring, the outdoor activities begin growing. The weather is getting warmer, so the outdoor terraces have become warm enough to be used. Courses for activities such as coastal foraging and water activities, like SUP, Windsurfing, kayaking and kite-surfing, are beginning. The first of the season's food harvest from Samsø is starting. The restaurant is also benefiting from the warmer weather.

The hotel is in full bloom in the summer, and the activities are in focus. The terraces are in full use; breakfast is served in the courtyard, while lunch and dinner are served on the terraces. The local producers are selling their goods in food stalls, making Samsø into one big food market the guest can explore on bicycles. The hotel will be bussing with activities both inside and outside in the nature. The beach will be full of bathing guests.

In fall, the wind increases, so the kite-surfing and windsurfing have optimal conditions. The weather is still warm, so the outdoor activities still take place. While the spa is still optimal, with the option of changing from beach to interior pools as one's pleases.

Illu. 183. Atmospheric picture of outdoor in summer

Illu. 184. Atmospheric picture of Samsø

6.0 Epilogue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6.1 Conclusion

A sustainable foodexperince hotel on coastal Samsø

Sælvig Beach hotel is a transformation hotel that focuses on gastronomy and sustainability. The hotel lies in the context beautifully, with the nature of the context going into the site and fading into meadows that allow the hotel to shine. The nature of the site is made to match the meadows in the context. The site also has incorporated coastal protection in the form of dunes and low-points scattered throughout the site, the biggest low-point being the parking. The façade also has coastal protection in the form of the original wall from the concrete factory.

The restaurant is placed in the middle of the hotel, ensuring it functions as the hotel's heart, together with having the kitchen in the middle of the restaurant. The restaurant has wood constructions and horizontal wooden boards on the roof slope. The seats have a view of nature that gives the guest an option to look at either the nature or the cook cooking in the middle.

The hotel has an inviting courtyard covered in the morning sun, where there will be able to be served breakfast but also taking tuition in the many water activities and coastal foraging that the hotel offers. On the other side of the hotel, there are the terraces that get the sun the rest of the day. All the terraces lie up to the restaurant to ensure easy serving of the terraces and connection between them.

Inside the hotel, visible construction runs over the whole hotel, amplifying the contrast between the wood and the light walls.

The hotel has 12 couple rooms, which gives the guest an option of actually getting to know the other guest and staff since the amount of people staying at the hotel is an intimate number. The rooms are divided over some on the ground floor and some on the first floor. All rooms have a view of the water and a French balcony to let plenty of sun into the room.

The hotel has a spa with different experience rooms in different pools, showers, and steam baths. The spa connects with the outdoors through the hot water pool that expands both inside and outside. The spa also has a path down to the beach to invite the guests to use the beach and the outdoor sauna to view the water.

6.2 Reflection

Even though the project has been finished and the group is happy with the results, there has been something that the group feels that could have been done differently or are not satisfied with.

The group had gotten tunnel vision on the idea of the project, following the wishes of the developer and making the project as realistic as possible. The developers had restrains such as coastal protection and the need to make money on the project when finished.
A significant part of the design process was used trying to fulfil those rules and ideas of the developer. It was not completely deleted in the finished design, it wasn't a waste of time, but if the time could have been used on the final design concept, the design could probably have gotten further.

The time of the project was narrow, with only two people in the group; the expectation of what was doable should be adjusted compared to when there normally are five people in the group.
With the start that went a bit slowly because of the tunnel vision, the question of the group has bitten too much.

The question of the work with re-establishing the nature into salt meadows. Has it been done enough, could there be collected more data on how to restore the nature? The group have had a hard time finding information on the restoration but have used the data found to try an establish nature that matches the surrounding with dunes and different grass and plant sorts that is natural to find in the area.

A project that lasted longer could also have been excellent since it would have given the possibility to see the island in peak season, but also when the nature is blooming and not just grey and sad.
The trips taken to Samsø were in February and March, so months when the plant life is not just beginning to blossom and all attractions are closed down for the season. The island is often just beginning to open up in mid-March.

The construction was drawn upon but was quickly chosen to mimic the construction found on the site already. This gives the positive outcome of the construction being reclaimed but has there been another construction design that has provided a better idea for the project. Did the chosen construction also limit the design of roof slopes? The options of other roofs would have given a new expression to the building. But this was only limited examined because of the wish to keep the construction. So the big question is was the group too quick to make a decision?

If the project had had more time, the group would have liked to work more in depth with sustainability. The group would have wanted to get a certification for the hotel, like Green-key, to visualise the sustainability of the final design. It could have been fun to work more in-depth with the restoration of nature and look into what plants should be added to the site.

6.3 Biblography

- Bergman, David, 2012, *Sustainable Design*, Princeton Architectural Press, USA

- Archdaily.com, 2018, *Noma 2.0/ BIG*, accessed: 15/04/2022, https://www.archdaily.com/902436/noma-big

- Archello, 2018, *Noma 2.0*, accessed: 15/04/2022, https://archello.com/project/noma-20

- Arkitektforeningen, 2019, *SVINKLØV BADEHOTEL: LYSVIRKNINGER*, accesssed: 11/04/2022, https://arkitektforeningen.dk/arkitekten/svinklov-badehotel-lysvirkninger/

- Big, 2018, *Noma*, accessed: 23/05/2022, https://big.dk/#projects-noma

- BR15, 2017, *"Bygningsreglementet 15, 6.5.2 Daglys"*, accessed 20/05/2022, https://historisk.bygningsreglementet.dk/br15_02_id102/0/42

- Bygningsreglementet, 2022, *bygningsreglementet.dk*, accessed:17/05/2022, https://bygningsreglementet.dk/

- Carlowitz, Hans Carl von, 1700s, found in Arler, Finn, 2015, *Bæredygtighed gennem 300 år*, Nyt Fokus 2015 (5) p. 14-17, Dk

- Conserve energy future, 2022, *Environmental Problems*, accessed: 15/04/2022, https://www.conserve-energy-future.com/15-current-environmental-problems.php

- Deseen, 2018, *BIG overhauls Copenhagen warehouse for Noma 2.0 restaurant*, accessed: 15/04/2022, https://www.dezeen.com/2018/09/24/big-noma-restaurant-copenhagen/

- DGNB-system, 2022, *"Overview of the criteria"*, accessed: 8/2/2022, https://www.dgnb-system.de/en/buildings/new-construction/criteria/

- Dinesen, *noma 2.0*, accessed: 15/04/2022, https://www.dinesen.com/en/inspiration/noma-20/

- Elgaard Architecture, 2018, *Sømindedepotet, Restaurant NOMA 2.0*, accessed: 15/04/2022, https://elgaardarchitecture.com/project/soeminedepotet/

- Elkington, John, 1999, *Cannibals With Forks – The Triple Bottom Line of 21st Century Business*, found in Nygaard Larsen, Line, 2016, *Begrebet bæredygtighed og socialøkonomiske virksomheder*, Thesis at Aalborg University, Dk

- Energiakadamiet, 2022, *"Samsøs omstilling"*, accessed: 16/2/2022, https://energiakademiet.dk/omstilling/

- Energistyrelsen, 2022, *Fakta om dansk energi- & klimapolitik*, accessed: 24/04/2022, https://ens.dk/ansvarsomraader/energi-klimapolitik/fakta-om-dansk-energi-klimapolitik

- Fredericia, 2019, *Svinkløv Badehotel*, accessed: 11/04/2022, https://www.fredericia.com/stories/a-soothing-scandinavian-feeling-by-the-roaring-north-sea.aspx

- Green Building Council Denmark, 2022, *"Kort om DGNB"*, accessed: 8/2/2022, https://dk-gbc.dk/dgnb

- Green Key, 2017, *"Green Keys reviderede kriterie for 2017"*, accessed: 8/2/2022, https://www.green-key.dk/media/71983/greenkeykriterier2017maendringer-300816.pdf

- Green Key, 2022, *"Om Green Key, Kriterier"*, accessed: 8/2/2022, https://www.green-key.dk/om-green-key/kriterier/

- Green Key, 2022, *"Om Green Key, Udbredelse"*, accessed: 8/2/2022, https://www.green-key.dk/om-green-key/udbredelse/

- JAaktuelt, 2018, *"Biosamfund Samsø i 2030"*, accessed: 16/2/2022, https://www.jaaktuelt.dk/momentum/2018/nr-4/biosamfund-samsoe-i-2030/

- Klima-, Energi- og Forsygningsministeriet, 2020, *Parisaftalen 2015*, accessed: 23/05/2022, https://kefm.dk/klima-og-vejr/klimaforhandlinger/parisaftalen-2015

- Knudstrup, Mary Ann, 2003, *The Integrated Design Process (IDP): a more holistic approach to sustainable architecture*, Aalborg Universitet, Dk

- Lawson, Bryan, 2005, *How designers think*, Architectural Press, Uk

- LOOP, 2021, *"Samsø Strandhotel – Prosepkt 2021"*, accessed: 17/2/2022, https://www.samsostrandhotel.dk/_files/ugd/70a582_62dd7d9328df431fbebffa8510b3d137.pdf

- Madsen, Jan Halberg, 2010, *Oplevelsesøkonomi*, Systime A/S, Dk

- Miljøministeriet, 2022, *"Overdrev"*, accessed 11/02/2022, https://mst.dk/natur-vand/natur/national-naturbeskyttelse/naturpleje/naturplejeportalen/naturtyper-og-deres-pleje/overdrev/

- Miljøministeriet, 2022, *"Strangenge"*, accessed 11/02/2022, https://mst.dk/natur-vand/natur/national-naturbeskyttelse/naturpleje/naturplejeportalen/naturtyper-og-deres-pleje/strandenge/

- Nielsen, Michael, 2020, *"Bygninger skal tænked ind i den grønne omstilling"*, accessed: 15/05/2022, https://www.danskindustri.dk/brancher/di-byggeri/nyheder/arkiv/pressemeddelelser/2020/8/bygninger-skal-tankes-ind-i-den-gronne-omstilling/

- Nordic Ecolabelling, 2021, *"About Nordic Swan Ecolabelled Hotels and other accommodation - version 5.0"*, accessed: 8/2/2022, https://www.ecolabel.dk/-/criteriadoc/6039

- Nordic Ecolabelling, 2021, *"Nordic Ecolabelling for Hotels and other accommodation - version 5.0",* accessed: 8/2/2022, https://www.ecolabel.dk/-/criteriadoc/6037

- Praksis arkitekter, 2019, *Svinkløv Badehotel*, accessed: 10/04/2022, http://www.praksisarkitekter.dk/svinkl%C3%B8v-badehotel

- Realdania, 2019, *Svinkløv Badehotel*, accessed: 10/04/2022, https://realdania.dk/projekter/svinkl%C3%B8v-badehotel

- Samsø Kommune, 2015, *Badevandsprofil - Sælvigbugten*, Samsø Kommune, Dk

- Samsø Kommune, 2021, *Samsø Kommune Kommuneplan 2021*, Samsø Kommune, Dk

- Studip David Thulstrup, 2018, *Restaurant Noma*, accessed: 15/04/2022, https://studiodavidthulstrup.com/noma-restaurant

- Svinkløv Badehotel, 2022, *Et lille indblik i Svinkløv historie*, accessed: 10/04/2022, https://www.svinkloev-badehotel.dk/historien-om-svinklov

- Trap Danmark, 2020, *Trap Danmark Samsø Kommune*, Trap, Dk

- VCOB, 2021, *Hvor meget C02 spares ved at bygge med cirkulære byggevarer?* , accessed: 23/05/2022, https://vcob.dk/media/2139/vcob_co2_besparelse_cirkulaere_byggevarer.pdf

- VisitDenmark, 2018, *Internationale mad og gastroturister I Danmark*, Dk

- VisitDenmark, 2019, *Kyst- og naturturister i Danmark 2019*, Dk

- VisitDenmark, 2021 a, *Turismen I Danmark 2021*, Dk

- VisitDenmark, 2021 b, *"Fire spor mod en bæredygtig turismeudvikling"*, accessed: 09/5/2022, https://www.visitdenmark.dk/corporate/om-os/nyheder/fire-spor-mod-en-baeredygtig-turismeudvikling

- VisitDenmark, 2022, *" Samsø "*, accessed: 25/3/2022 https://www.visitdenmark.dk/danmark/explore/samsoe-gdk1098729

- VisitJammerbugten, 2022, *Svinkløv Badehotel*, accessed: 10/04/2022, https://www.visitjammerbugten.dk/jammerbugten/inspiration/parferie/svinkloev-badehotel

- VisitNordvestkysten, 2022, *Svinkløv Badehotel*, accessed: 10/04/2022, https://www.visitnordvestkysten.dk/nordvestkysten/planlaeg-din-tur/svinkloev-badehotel-gdk1098863

- VisitSamsø, 2022, *Samsø Feriemagasin 2022*, Dk

- Vækstteamet, 2013, *Vækstteam for Turisme og Oplevelsesøkonomi*, Dk

- World Commission on Environment and Development, 1987, *"Our Common Future"*, accessed: 8/2/2022, http://www.un-documents.net/our-common-future.pdf

6.4 Illustration list