Eindhoven University of Technology

MASTER

The Tides hotel

an eighty plus holiday destination

Greve, L.

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THE TIDES HOTEL
AN EIGHTY PLUS HOLIDAY DESTINATION

THE TIDES HOTEL — LIEKE GREVE

THE TIDES HOTEL

An eighty plus holiday destination

LIEKE GREVE

THE TIDES HOTEL

An eighty plus holiday destination

Graduation Studio
"The Future of Leisure"

Lieke Greve
0913382

February – November 2017
Master Architecture, Building & Planning
Eindhoven University of Technology

David Gianotten
Sjef van Hoof
Maarten Willems

Figure 1: Personal timeline on architecture and leisure

PREFACE

'The Tides Hotel'. A design research towards the ideal holiday destination for people aged eighty years and older, located in the south of Portugal. This thesis gives background information on the site and context. It has been written as part of my graduation from the study 'Architectural Urban Design and Engineering' at the Technical University of Eindhoven, the Netherlands. From February to November 2017 I have been researching and writing the thesis and made a design as a result of it.

During my study, I worked for six years in a nursing home for people with dementia. My mother works for more than thirty five years in a nursing home, so me and my sisters and brother grew up with love for the elderly. People fascinate me and the elderly even more. They have already experienced so much and you can learn a lot from their life experience.

The subject of this graduation studio is 'the Future of Leisure'. Looking to the future, where people will get older and stay longer vital, and my fascination for elderly people, I designed a leisure building for the elderly of the future. Nowadays, many holidays are offered for people who are sixty five years and older, but these trips are often too active for the elderly who are eighty years and older. This results in the fact that almost no people from this target group are still going on holiday. With this project I want to make a holiday for this target group easily accessible.

Defining the subject and the project location was not easy due to its importance for my study in its whole. Nevertheless, after conducting in-depth research towards several subjects and locations the choice for a holiday destination for elderly was obvious. Also the location of the project in Faro, Portugal, made me very excited and inspired me enormously. The overall design process went not always well and smooth, but in the end I am happy with the result.

I would like to thank my three supervisors, David Gianotten, Maarten Willems and Sjef van Hoof, for their constant feedback, support and guidance during this process. Furthermore, I would like to thank my friends and family, and especially my parents, for their enormous support during the last months.

I hope you enjoy your reading.

Lieke Greve

Eindhoven, September 22, 2017

Figure 2: Personal collage

ABSTRACT

The world is constantly changing. By 2030, only thirteen years from now, the world will probably look different than the world we are now accustomed. The climate is changing, the technology develops further and people become older and stay longer vital. Looking to the future, it seems that leisure time is becoming more important as it is already now.

The ageing population has an influence on the future of leisure, the activities must change to the needs. Future elderly are for example more used to go on holiday than the elderly of today. However, accessibility and care within tourism are still unprecedented themes in most cases.

As they grow older, elderly people lose a lot of social contacts. Especially at a higher age, their world becomes very small and many elderly feel increasingly lonely, especially during winter time. Another surrounding and good weather makes them happy again. Therefore, the research question is as follows: "How can specific leisure needs and desires of eighty plus be used to shape a holiday destination?".

Faro was found as an ideal holiday destination for Dutch elderly. The peninsula Ilha de Faro has a clear overview and there are opportunities to visit a city or the natural park. There are also golf courses and the airport and the sea are nearby. The enormous tidal difference in the natural park makes this place unique. With this features, a passive form of entertainment has been added to the design and made the project extraordinary.

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Prior to determining a leisure design proposal, different research projects were done. Namely, searching for my own definition of leisure, different leisure concepts and making a personal timeline on architecture and leisure. These first assignments gave us the opportunity to introduce ourselves and show what we wanted to achieve in the end. After the individual research, a group research followed. A global research in differences and similarities of the continents in general, a more in depth research of nine countries around the world and seventy-five leisure concepts in the categories of food, sport, city, water and nature. During this research phase, the personal interests developed and also ideas about the future of leisure.

Leisure can be seen as "time to relax without obligations" and "an escape from daily activities". Looking to the future of leisure, it seems that we want to escape even more from our daily activities and want to relax without disturbing. One of the leisure concepts of the group research was the Maldives. This concept is interesting in combination with the definition of leisure described before. The islands are located far away from mainland and far away from the daily stressed routine many people have. This concept can be an example of an ultimate holiday destination.

After this research part, the individual period started. It was not easy to choose a subject and location. Leisure is a broad term and it hardly possible to define one clear definition. However,

looking to the future where people become older and stay longer vital, it is an interesting target group to design a leisure building for. Nowadays, holidays are considered as a basic requirement. However, it is not as evident to anyone to participate in this. Elderly experience often problems during their leisure activities. The growth of this group offers opportunities for the tourist-leisure sector. More and more tourists need care and the facilities to go on holiday. Another problem is as they grow older, elderly people lose a lot of social contacts. Many elderly feel increasingly lonely. It would be good to encourage social contacts of elderly people in the future and make the leisure activities easily accessible.

Therefore, this graduation will focus on answering the question: "How can specific leisure needs and desires of eighty plus be used to shape a holiday destination?".

To make the most ideal holiday destination for the Dutch elderly, there are some important requirements for the location. Perhaps the most important requirement is the climate, it must be assured of good weather. Another requirement is the distance of the destination. The ideal location should be in the radius of maximum three-hour flight. It would be perfect if the airport is close to the holiday destination, to make it easily accessible. The holiday destination has to be in a quiet environment with possibilities to go to a city or excursion. After some research, Faro was found as an ideal holiday destination.

RESEARCH

MORE EXTREME

ME-TOO-BEHAVIOR

ESCAPE

BECOMES GENERIC

MORE MULTIFUNCTIONAL

NEW   PLACES
NEW BUILDINGS

ENTERTAINMENT

EVERYWHERE

WORK & PRIVATE
MERGE

EASILY BORED

BIGGER

CITY BECOMES PLAYGROUND

BUSIER

MORE TIME, MONEY & KILOMETERS

MORE IMPORTANT

TIME SCARCER THAN MONEY

CAR HAS INCREASED   PICKY
OUR RANGE

SUBJECTIVE

NO OBLIGATIONS

TIME TO RELAX

LEISURE

ENJOY IS NOT A PRIVILEGE, BUT A DUTY

CANNOT   ENTERTAIN

OURSELVES ANYMORE

URGE TO ENJOY THEMSELVES PRDOUCE
MORE   STRESS   THAN   HAPPINESS

AMUSING OURSELVES TO DEATH

NOSTALGIA

FOR THE PAST

Figure 3: Visualization of my own definition of leisure

DEFINITION OF LEISURE

The dictionary states that the definition of leisure means: "Time when one is not working or occupied; free time." (Oxford Dictionary, 2017). But actually it is a subjective definition. For someone is doing a sport the ultimate leisure time, while it does not supply for someone else. Leisure time can be described as "an escape from daily activities" or "time to relax without obligations".

Based on books and articles about leisure, it can be concluded that leisure has become more important in our contemporary life than several years ago. We are busier in comparison to fifty years ago and we want to spend our time as efficient as possible. Costs of the activities are not really relevant. We are easily bored, we want everything to be more extreme. It seems that enjoying is not a privilege anymore, but an obligation. Nowadays, entertainment is everywhere and leisure buildings becomes bigger and more multi-functional. This concept of generic leisure buildings is applied in every city, through which all cities seem to become rather generic leisure cities. (Metz, 2002)

Looking to the future of leisure, it seems that one wants to escape even more from their daily activities. There is already the problem that we cannot entertain ourselves anymore. The urge to enjoy ourselves produce even more stress than happiness. In the future there will be a nostalgia for the past, they want to relax without disturbing. And really important, they want to be entertained as much as possible. It seems that extremity is still an important aspect of leisure in the future.

Figure 4: Are they an example of future elderly?

Nowadays, holidays are considered as a basic requirement. However, it is not as evident to anyone to participate in this. An increasing group of people, such as the elderly or the disabled, experience problems with daily activities and thus as well during their leisure activities. The growth of this group of care-needers and the increasing attention to care, offers opportunities for the tourist-leisure sector. More and more tourists need care and the facilities to go on holiday.

Our life expectancy is rising and in the future there will be more elderly people compared to nowadays. In 2030, twenty-five percent of the Dutch population belongs to that group of sixty-five years and older (Rijksinstituut voor Volksgezondheid en Milieu, 2014). The baby boomers, born after World War II, are eighty plus in 2030. The ageing population has an influence on the future of leisure, the activities must change to the needs. However, accessibility and care within tourism are still unprecedented themes in most cases. According to the research of 'het Expertisecentrum Business Management van VIVES', the majority of holidaymakers with a disability or care need, experience accessibility barriers in holiday homes (74%) and in the vicinity of the holiday home (69,1%) (Sys, 2015). Fortunately, there is already a range of accessible holiday accommodations, albeit very limited.

The future elderly are more used to go on holiday and other leisure activities than the elderly of today. There are already many foundations who organize holidays for people above sixty-five years, but for people above eighty years of age there is little offer. People around that age have less need to see much of a city, the most elderly holidays nowadays are too intensive for them. This results in the fact that almost no people from this target group is still going on holiday.

As they grow older, elderly people lose a lot of social contacts. Especially at a higher age, their world becomes very small. Nowadays, elderly should live as long as possible at their own home. It is suggested that staying at home would be less expensive than moving to a care center. But is it actually the most beneficial? There is at this moment already a problem that many elderly feel increasingly lonely, especially during winter time. This will increase in the future when robots will replace the nursing. It would be good to encourage social contacts of elderly people in the future and make the leisure activities easily accessible.

THE FUTURE OF LEISURE FOR THE ELDERLY

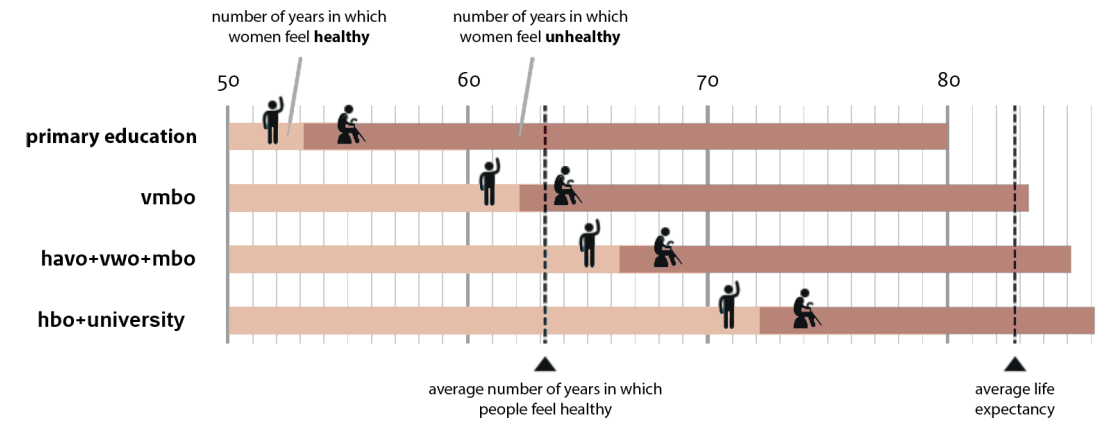number of years in which women feel **healthy**

number of years in which women feel **unhealthy**

50   60   70   80

primary education
vmbo
havo+vwo+mbo
hbo+university

average number of years in which people feel healthy

average life expectancy

Figure 5: Women education level and healthy life expectancy

85

female: 85,2

male: 82,5

80

75

2000   **2017**   2030
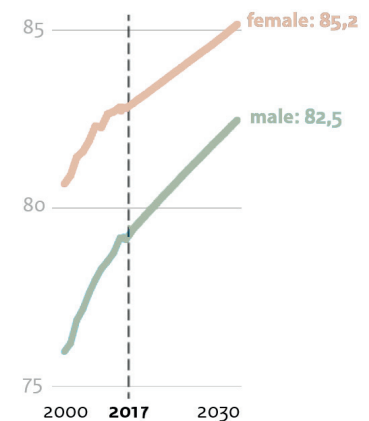
Figure 7: Life expectancy 2000 – 2030

STATISTICS

number of years in which men feel **healthy**

number of years in which men feel **unhealthy**

50   60   70   80

primary education
vmbo
havo+vwo+mbo
hbo+university

average number of years in which people feel healthy

average life expectancy
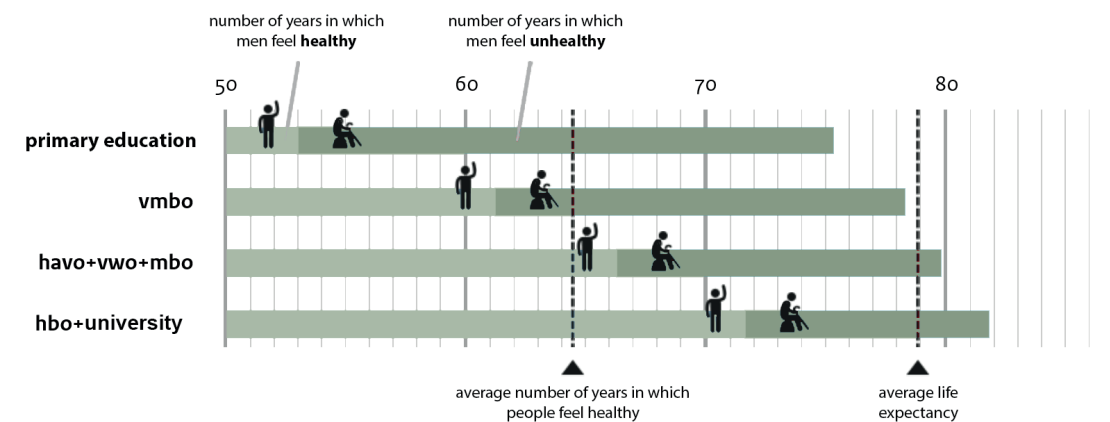
Figure 6: Men education level and healthy life expectancy

1 mln   2 mln   1 mln   2 mln
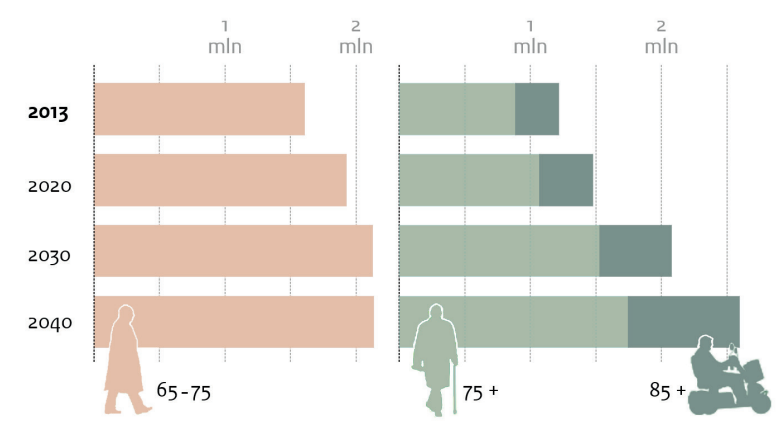
2013
2020
2030
2040

65-75   75 +   85 +

Figure 8: Number of elderly people

According to Huang and Tsai (2003), "Seniors will soon be one of the largest prospective market segments for the hospitality and travel industries".

In the future, people will stay longer vital and become older. The data in figure 7 shows that the life expectancy of people increase with more than five years. Nowadays, the life expectancy of the Dutch men is seventy–nine years and is therefore among the highest in the European Union. Dutch women have a life expectancy of eighty–three years. Furthermore, the number of elderly people will increase enormously over decades (figure 8).

Another research shows the life expectancy of people compared to the highest study they completed. As you can see, people who only finished their primary education feel already unhealthy at the age of fifty–three. People who finished their bachelor or master feel healthy until the age of seventy–two, so it is a huge difference (figure 5 and 6).

Many elderly who are not go on holiday anymore assert that they still feel the need of a changing surrounding. Often they stay home because of the bad physical condition. This applies especially to the group of seniors over seventy–five years. Another reason is that a holiday is too expensive. It is a very interesting group to build a leisure project for. It will be a big group in the future, they have enough time to spend their leisure time and there is at this moment not much offer.

THE FUTURE OF HOTELS

To envision the future is a difficult task. Tourism has a huge effect on the social and economical development of a country, it is the most important industry in the world in terms of the numbers of employees.

It seems that hotels in the future are more distinguished with originality and dare to focus on specific target groups. Predicting the wishes of travelers plays an important role. It seems that hotels will become an entertainment experience. The new traveler would rather be in a nice lobby or bar than in their room. The rooms will be therefore smaller in the future.

According to Ivanka Holjevac, the 21st century will bring more leisure time, a higher standard of living and a better quality of life. Improving the quality of life is one of the great challenges for the tourism of the future.

In the discussion paper: "A vision of tourism and the hotel industry in the 21th century" they describe that there is no standard for the hotel of the future. They think that every hotel will gets his own "theme". There will be for example spa hotels, educational hotels, green hotels etcetera. Also vacation hotels designed to meet the needs of elderly tourist are described. As life spans increase, the hotels will offer comfort, tranquility, opportunities for socializing, food and drinks adjusted to the special needs and requirements of the elderly. There will be special treatments and exercises for the body and spirit. (Holjevac, 2003)
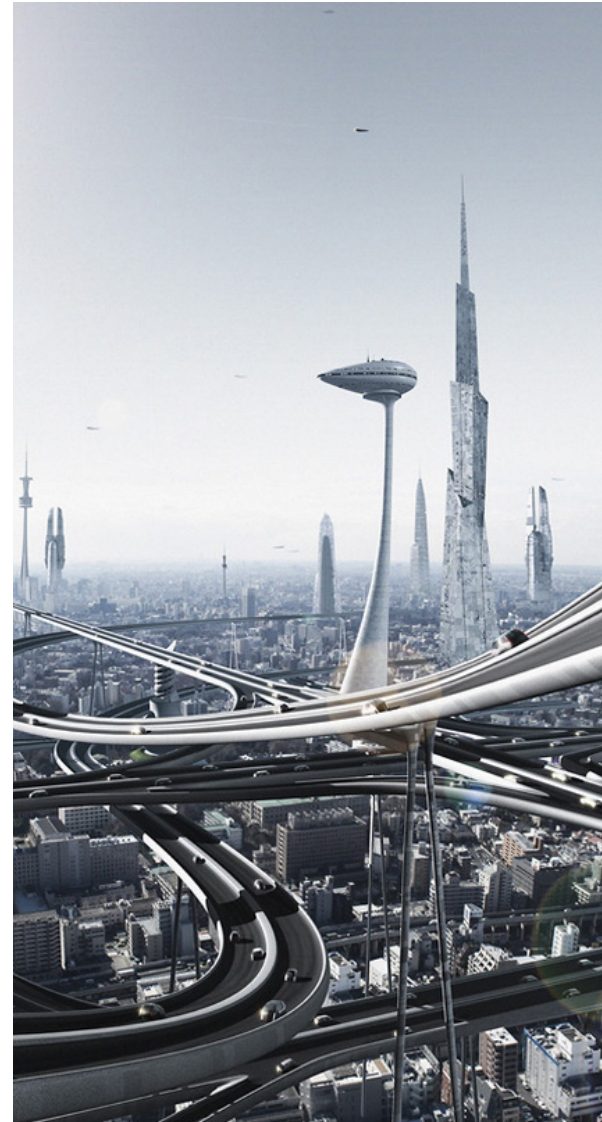

Figure 9: Impression of a future city

CARE HOTEL

Care on holiday is becoming increasingly important. With the increase in age and the amount of elderly, the number of caregivers will also increase. Opinions differ from whether care tourism has a care focus or a recreational focus. The research of Van Gijselinckx (2012) indicates that specific infrastructure, special diets and activities should be offered.

Care is the central point in the care tourism. This form of tourism strives for a pleasurable holiday for people with chronic illness or limitation. Providing this by the necessary care, nursing and assistance, but also by providing a suitable and accessible environment. Care tourism goes beyond accessible tourism, by adding a caring dimension.

Since a few years there is a new concept in the Netherlands called 'care hotel'. A care hotel provides a temporary stay with nursing and caring for twenty-four hours a day. It is for people who rehabilitate or recover after surgery at the hospital, but still need help and cannot stay longer in the hospital. It can also be a temporary stay for people who are cared by family and the caregivers are for a while not available or are on holiday. Different health insurers compensate the stay in a care hotel. Perhaps it is interesting to make a care hotel for Dutch elderly which has a more recreational focus.

Figure 10: Care on holiday

Figure 11: A group of 65 year olds

Figure 12: A group of 80 year olds

PROBLEM DEFINITION & RESEARCH QUESTION

Nowadays, holidays are considered as a basic requirement. However, it is not as evident to anyone to participate in this. Elderly experience often problems during their leisure activities. In the future, more and more tourists need care and the facilities to go on holiday. The future elderly are more used to go on holiday activities than the elderly of today. There are already many foundations who organize holidays for people above sixty-five years, but for people above eighty years of age there is little offer. People around that age have less need to see much of a city, the most elderly holidays nowadays are too intensive for them. This results in the fact that almost no people from this target group is still going on holiday.

Another problem is as they grow older, elderly people lose a lot of social contacts. Many elderly feel increasingly lonely, especially during winter time. It would be good to encourage social contacts of elderly people in the future and make the leisure activities easily accessible.

This graduation will focus on answering the question: "How can specific leisure needs and desires of eighty plus be used to shape a holiday destination?".

The research question has been subsequently evolved as follows:

Which architectural elements can play a part to reach that?

To what extent can a holiday destination for the target group be optimally utilized or ideal?

What leisure aspects can play a part in the daily life of an eighty year old person?

Which leisure activities can be performed by eighty year old people and older?

Which climate is ideal during leisure activities for the older generation?

LOCATION

Figure 13: Holiday destinations of elderly nowadays

TORREMOLINOS
MONTE GORDO
MURCIA
CRUISE
BENIDORM
ADEJE PLAYA
BENALMADENA
MALLORCA
PLAYA DE LAS AMERICAS
PLAYA DEL INGLES
ALGARVE
TURKEY
ALBUFEIRA

Figure 14: Holiday destinations of elderly nowadays

HOLIDAY ON CRUISESHIP
NEVER ON HOLIDAY
DUTCH SPEAKING
NO LONGER POSSIBLE PHYSICALLY
WINTER
NOT TOO ACTIVE
SPRING/ AUTUMN
EXCURSIONS
CLEAR & OVERVIEW
I NEED HELP WHICH IS NOT THERE
LONG BUS RIDE
ADAPTED FOR ELDERLY
NO NEED ANYMORE
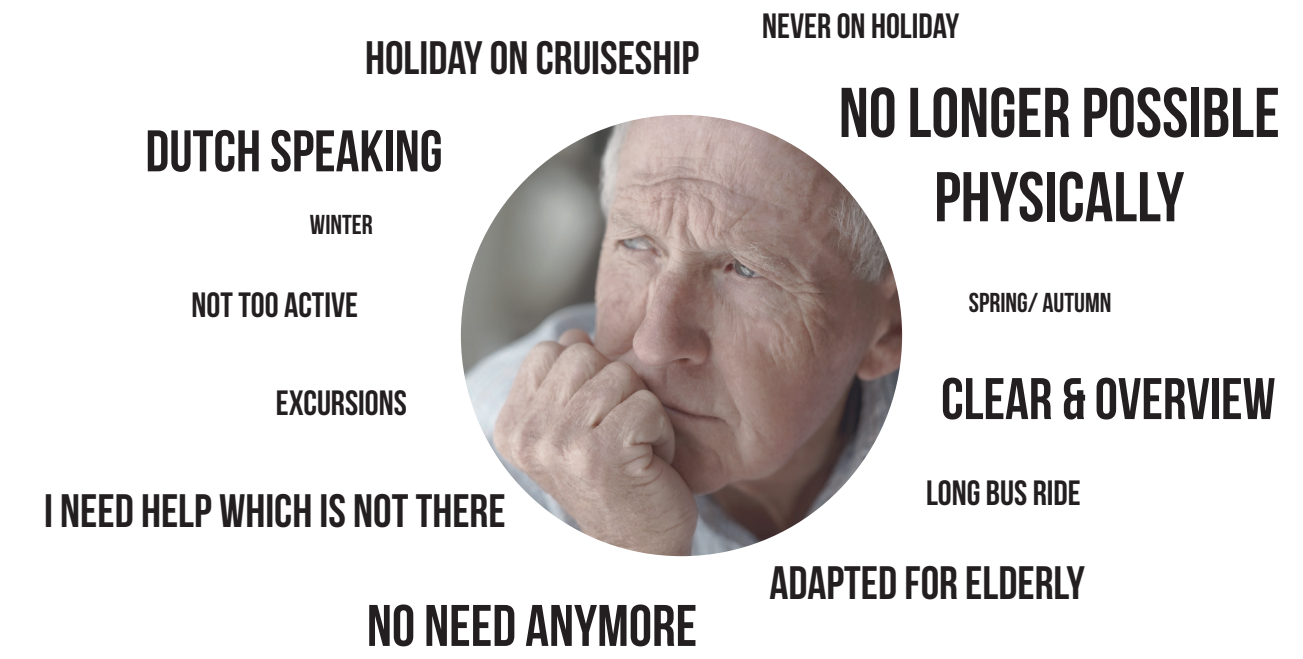
Figure 15: How elderly think about holidays nowadays

SELECTION OF LOCATION

Before searching for a specific location, a small research was done. To four different travel agencies, the question has been asked where eighty plus people go on holiday nowadays. The result is shown in figure 13 and 14. The more often they called a place, the bigger the font size. Striking is that the south of Europe is the most popular, especially places at the coastline of Spain and Portugal.

Furthermore, a couple of random elderly have been asked if they still go on holiday and what they consider important for a holiday. This result is shown in figure 15. In conclusion, it can be said that most of the elderly who are questioned do not go on holiday. The main reason is that they think they cannot handle it physically. However, it should be noted that many elderly nowadays are not used to go on holiday. In the past, it was not as obvious as nowadays. Nonetheless, this project is about the future. It is hard to compare the elderly of nowadays with the elderly of the future, who are more used to go on holiday.

Figure 16: All Dutch airports and all airports on the coastline of Spain and Portugal
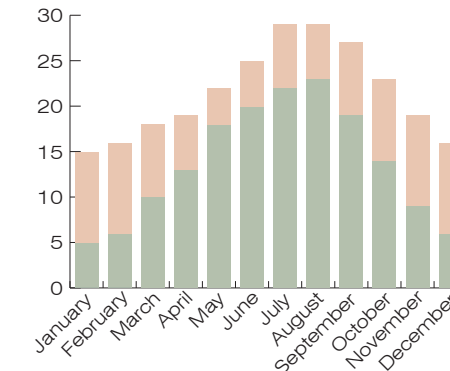

Figure 17: Accessibility of Faro airport

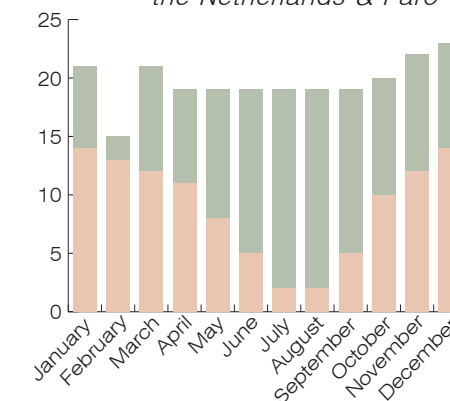Figure 18: Temperature comparison the Netherlands & Faro

Figure 19: Precipitation comparison the Netherlands & Faro

SELECTION OF LOCATION

To make the most ideal holiday destination for the Dutch elderly, there are some important requirements for the location. Perhaps the most important requirement is the climate. Research shows that elderly people feel particularly lonely and depressed during winter time. Their world becomes very small, because they stay often inside and have few social contacts. During summer, people are generally happier and the social contacts outside are easier to make. For that reason, there has been searched for a location with the ideal climate and circumstances during winter time. It must be assured of good weather, temperatures between fifteen and twenty-five degrees are perfect.

Another requirement is the distance of the destination. The ideal location should be in the radius of maximum three-hour flight. It would be perfect if the airport is close to the holiday destination, to make it easily accessible. The holiday destination has to be in a quiet environment with possibilities to go to a city or excursion.

Flight ticket website TIX.nl did a research of the destinations where seniors take a flight the most during winter months and calculate what the popular summer destinations are for the older traveler. During winter months, the canary islands and Spain are the most popular. During winter time, twenty percent of the travelers to Alicante are sixty years and older. During summer, there are a lot of seniors who are traveling to the south of France. London, Berlin, Ibiza and Valencia are less popular.

The flight ticket website researched also the most popular destinations outside Europe. During winter time Bangkok, Cape Town and Denpasar (Bali) are the most popular destinations. During winter months twenty-two percent of the travelers to Denpasar are at least sixty years old. Popular destinations outside Europe during summer time by elderly people are Toronto, Montréal, Tel Aviv and Auckland.

Based on the research of the flight ticket website in combination with the requirements already set, a location on the coastline of Spain or Portugal will be the most ideal. Searching for the airports on this coastlines (figure 16), Faro was found as an ideal holiday destination and is easily accessible from many airports in and around the Netherlands (figure 17).

DESCRIPTION FARO

Figure 21: Location of Faro

Faro is a city in the Algarve region with around 64.500 inhabitants. It is located in the South of Portugal and covers an area of approximately 203 square kilometers. Many visitors only pass through this city, regarded simply as a point of entry to southern Portugal, via the main airport of the region. Faro as a holiday destination is often overlooked, which is a pity, as the Algarve's capital has a more distinctly Portuguese feel than most resort towns.

Faro has an attractive marina, well-maintained parks and plazas, and a historic old town full of outdoor cafes. The old part of the city is still surrounded by the Roman walls which date back to the 9th.

The city is situated on the edge of the Ria

Formosa National Park, a nature reserve of over 17.000 hectares and a stopping place for hundreds of different birds. Beyond the Ria Formosa lagoon are the three sandbar islands, which are the location for Faro's beaches. The beach is almost seven kilometers distant from the city and is a long sandy spit reached by crossing a bridge not far from the International Airport.

The Natural Park, founded in 1987, is recently elected as one of the seven Natural Wonders of Portugal. It has an area about sixty kilometers of coastline. It was set up to protect the natural ecosystem for threats. The reserve is surrounded by a chain of islands and peninsulas of sand surround by a large lagoon. The band of islands protects life in the lagoon against the open sea.

The islands do not connect, so there is ebb and flood in the lagoon.

The lagoon consists of marshes, saltpans, seagulls and canals. The water in the lagoon is filled with all kinds of shellfish that are also grown and represent about eighty percent of the total exports. Besides shellfish, there are also many other types of fish. The fish attracts, together with the climate, many wild birds like herons and storks. The narrow canals are the perfect breeding ground for them.

Figure 20: Faro in its surrounding

ILHA DE FARO

The beaches around Faro are "ilhas" (sandspits) that form the outer edge of the marshlands and lagoons. Ilha de Faro is the most western island of the Ria Formosa. It is the only one that is accessible from the city by a bridge from the mainland. Ilha de Faro has two sides, the lagoon side and the seafaring side. The lagoon side is attractive with colorful boats bobbing on the water and moored on the slipways. The rear of the island overlooks the lagoons and tidal mud flats, while the beach extend for five kilometers, along the entire sea facing side of the Ilha de Faro. This laid-back resort town is virtually unknown by foreign tourists.

Praia de Faro, the best beach of Faro, located on the peninsula, is classified as 'Accessible Beach'. It provides ramps, footpaths and walkways directly to the sand. It also meet certain criteria for restaurant tables, bar and counter heights. They also have first aid posts and disabled toilets and should be equipped with wheelchairs, walking aids and other equipment capable of being used in the sea as well as on the beach.

Figure 22: Ilha de Faro

Figure 23 – 26: Ilha de Faro –->

golf course

ancão
peninsula

airport

cities

natural park
ria formosa

LOCATION WITHIN FARO

While searching for the ideal destination, some requirements were set up. The weather conditions during wintertime should be between fifteen and twenty-five degrees and the location should be in the radius of maximum three-hour flight. Furthermore, there was a requirement that the destination would be close to the holiday destination and it has to be in a quiet environment with possibilities to go to a city or excursion.

Faro seems as the perfect destination. Or rather say, Ilha de Faro, which is located on the Ancão peninsula. The peninsula itself is a quiet and orderly environment. One cannot get lost and there are various restaurants and shops. Close to the island, there is a golf course and two cities that can be visited. Moreover, an excursion to the beautiful Natural Park Ria Formosa can be a nice daytrip.

Figure 27: Surrounding of Faro

Figure 28: Routing of Ilha de Faro

Figure 29: Camping and hotels

LOCATION ANALYSIS

The central area of Ilha de Faro is the most developed section of the peninsula. There are bars, restaurants and hotels situated. The beach can be quite busy in the summer, but the further you go from the mainland bridge, the more quiet and unspoiled it will become. There is a road which follows the beach in both directions and is lined with Portuguese holiday homes, that eventually leads to deserted beaches.

<-- Figure 30: Restaurants and bars
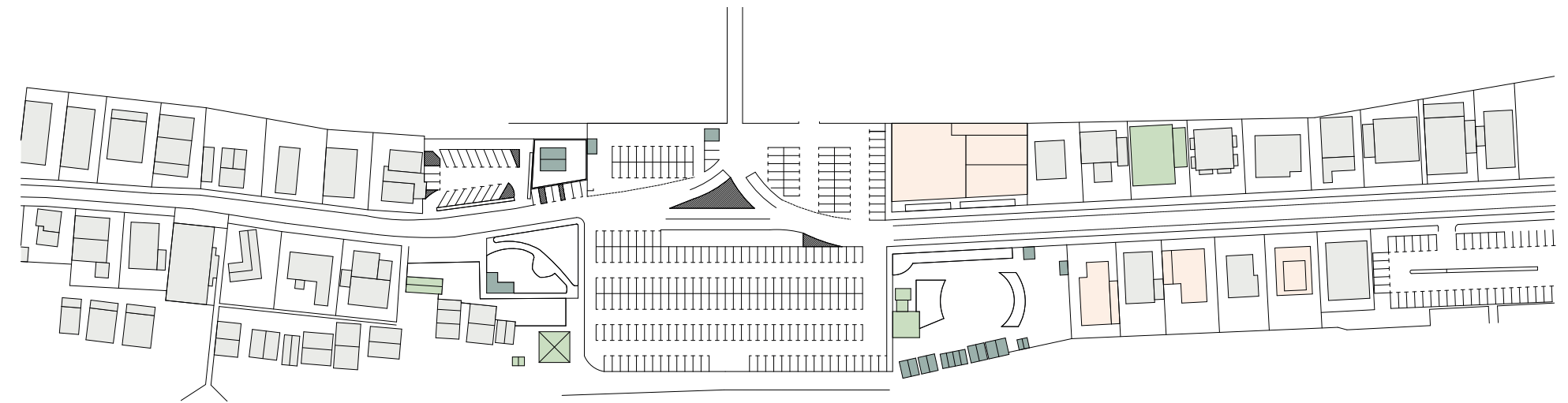
Figure 31: Central area of Ilha de Faro

Figure 32: Holiday houses and hotels

Figure 33: Fishermen houses

EXISTING BUILDINGS

The central part of Ilha de Faro consists of holiday houses, hotels, bars and restaurants. This buildings are mostly cladded with a white or yellow tinted plaster. More close to the deserted beaches the fishermen houses can be found. This houses are smaller and consists sometimes also of plaster, but in general wood is a widely used material in this area.

Figure 34: High tide
11–06–2017 17:17

Figure 35: High tide
12–06–2017 9:03

Figure 36: Low tide
12–06–2017 11:10

SITE VISIT

Halfway through the graduation project, a site visit was made. The city of Faro was visited, a boat trip through Ria Formosa was made and of course a visit to Ilha de Faro was included. During this trip, the feeling of the environment was more clear. Spoke to many people who give information about the city, the peninsula, the future of the peninsula and the activities in the surrounding.

The enormous difference between high and low tide was remarkable. In just a few hours, the peninsula seems to overflow, while a few hours later the whole surrounding was almost dry. During this visit, the idea for the project started to take shape. Most of the elderly are not really active anymore, therefore a passive form of entertainment should be included in the design. For that reason, the height difference of the water can be added as a passive form of entertainment. It is a unique concept which cannot be found in other elderly holiday destinations.

SHORELINE EVOLUTION

Many studies have been done to this particular natural park. There are significant changes in the back−barrier shore caused by human activities. Changes under natural fording were much smaller. Since the 1940s there is human occupation at the peninsula. To recover the natural dynamic equilibrium, the Ria Formosa system has undergone an environmental rehabilitation program, in this way, the natural hazards are reduced. This program included engineering techniques like tidal channel dredging and the relocation of two inlets. In 1990 and around 2000, sand renourishment operations occurred close to Ilha de Faro. The inlet was relocated in 1997 to a more westerly position to reduce navigational difficulties and to improve its hydrodynamic efficiency. (Ramos, 2000).

By analyzing a time−series of georeferenced aerial photographs (figure 37), the shoreline evolution over the last sixty years was calculated (Carrasco, 2012). Two major periods of change occurred: before human interventions, between 1947 and 1996 with minor changes for the beach profile, and prior to human interventions, after 1996 with deep changes for the beach profile and surrounding tidal channel.
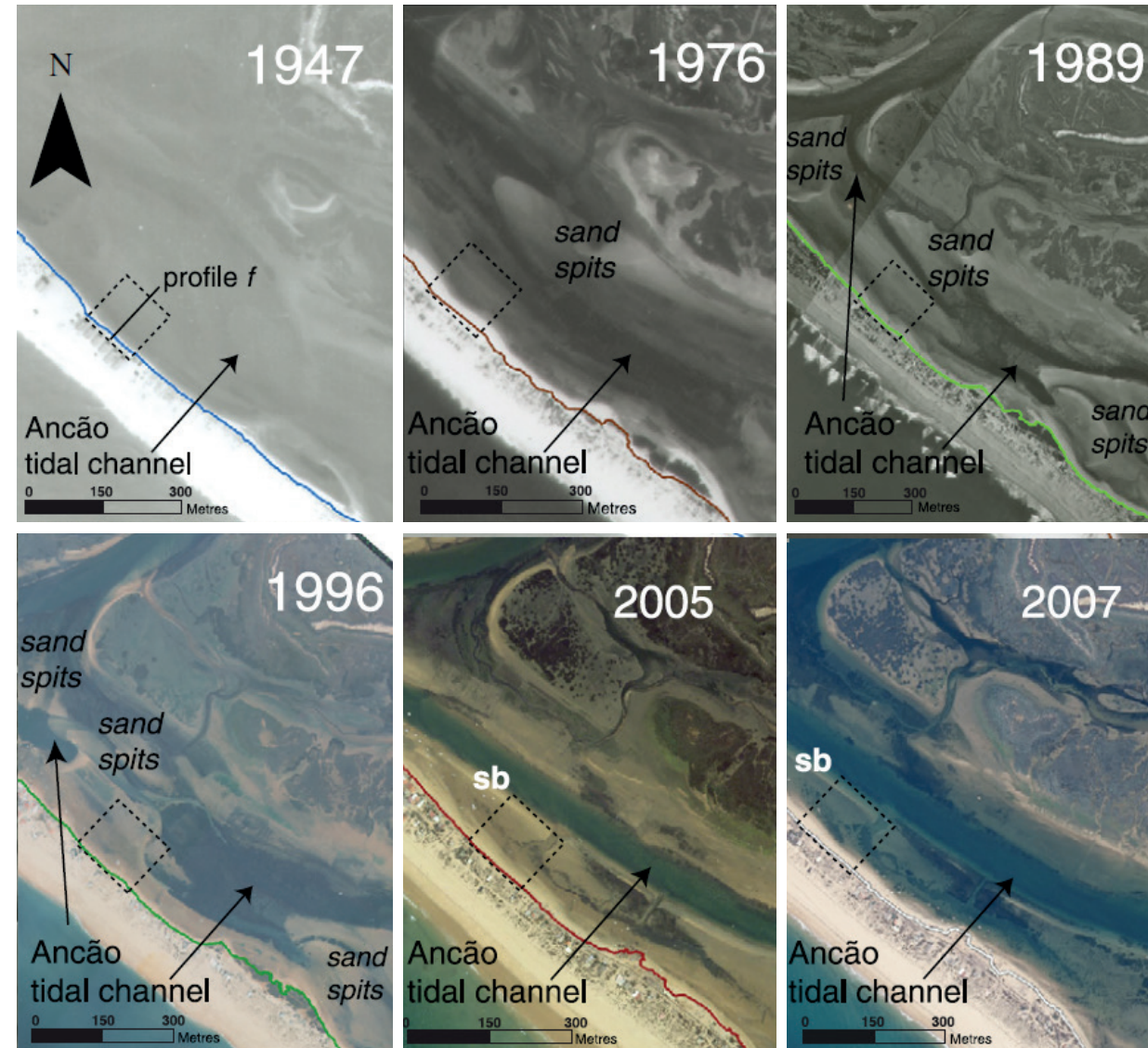
Figure 37: Shoreline evolution

TIDES

The alternating pattern of rising and falling sea level arise from the gravitational forces of the sun and moon. Ocean water is kept at equal levels around the planet by gravity pulling inward and centrifugal force pushing outward. The gravitational forces of the moon are strong enough to disrupt this balance by accelerating the water towards the moon. As the Earth spins on its own axis and the moon orbits our planet, the water also moves. High tide can be experienced at the areas of the Earth closest to the moon, and the other areas are subject to a low tide. On the opposite side of Earth, water bulges also outward, experienced as high tide.

A tide cycle takes twelve hours and twenty−five minutes. The rhythm of high and low tide is very constant, as the movements of the earth and the moon. Tides most commonly occur twice a day. The tidal effect increased when the sun lines up with the moon and the Earth, as during a New Moon or Full Moon. These are known as spring tides. During the course of a month, the height of the tides can also vary because the moon is not always at the same distance from the Earth.

Figure 38 shows the lowest and highest water level in Faro. In the graph the difference in tide height is clearly observable. Tides in this area are semi−diurnal; average ranges are almost three meters for spring tides and one and a half meters for neap tides. On the next pages, self−made pictures show the effect of this difference in tide for the peninsula.
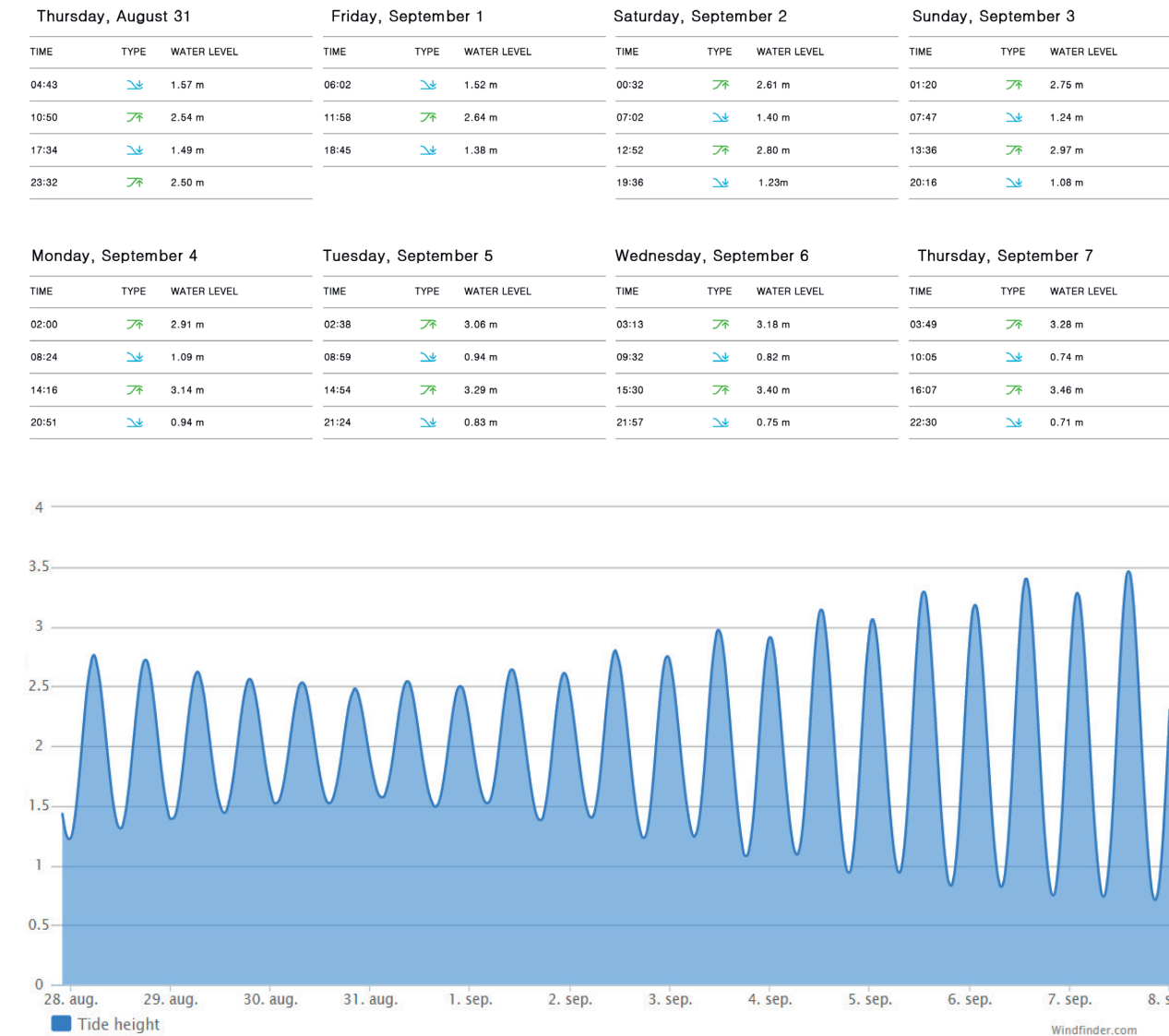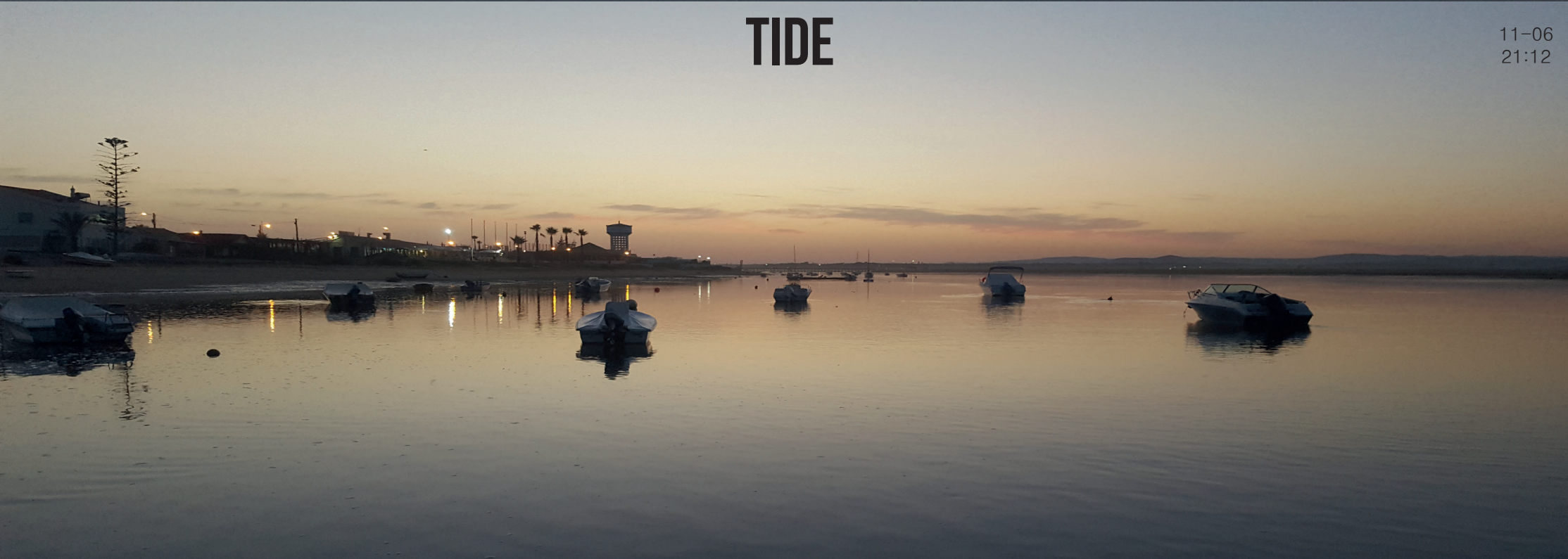
Thursday, August 31			Friday, September 1			Saturday, September 2			Sunday, September 3		
TIME	TYPE	WATER LEVEL	TIME	TYPE	WATER LEVEL	TIME	TYPE	WATER LEVEL	TIME	TYPE	WATER LEVEL
04:43		1.57 m	06:02		1.52 m	00:32		2.61 m	01:20		2.75 m
10:50		2.54 m	11:58		2.64 m	07:02		1.40 m	07:47		1.24 m
17:34		1.49 m	18:45		1.38 m	12:52		2.80 m	13:36		2.97 m
23:32		2.50 m				19:36		1.23m	20:16		1.08 m

Monday, September 4			Tuesday, September 5			Wednesday, September 6			Thursday, September 7		
TIME	TYPE	WATER LEVEL	TIME	TYPE	WATER LEVEL	TIME	TYPE	WATER LEVEL	TIME	TYPE	WATER LEVEL
02:00		2.91 m	02:38		3.06 m	03:13		3.18 m	03:49		3.28 m
08:24		1.09 m	08:59		0.94 m	09:32		0.82 m	10:05		0.74 m
14:16		3.14 m	14:54		3.29 m	15:30		3.40 m	16:07		3.46 m
20:51		0.94 m	21:24		0.83 m	21:57		0.75 m	22:30		0.71 m

Figure 38: Water level Faro

HIGH

TIDE

LOW

TIDE

11–06 21:13
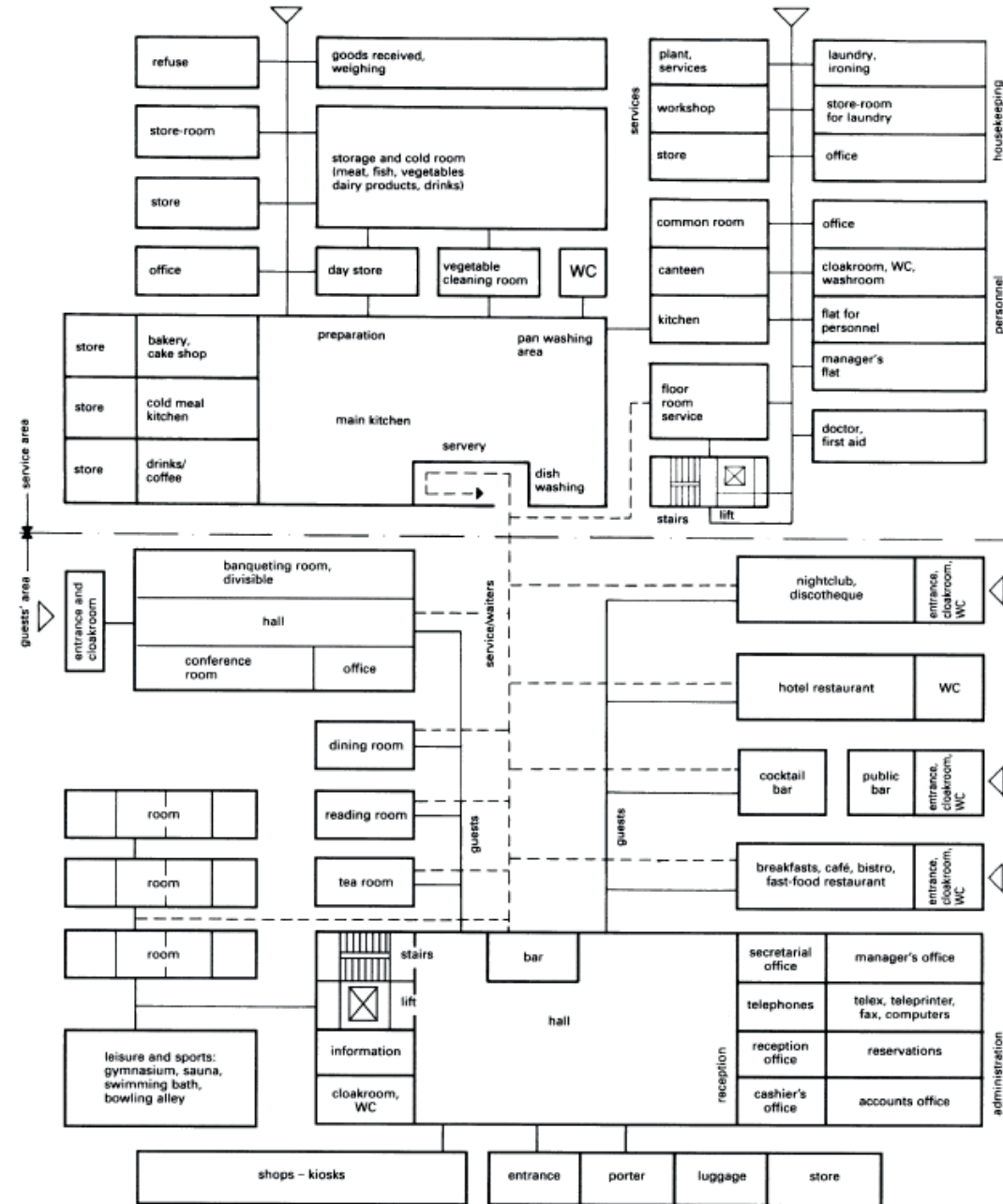
12–06 11:08

11–06 21:12

12–06 10:57

PROGRAM
& SHAPE

Figure 43: Organizational diagram of a hotel

ORGANIZATIONAL DIAGRAM
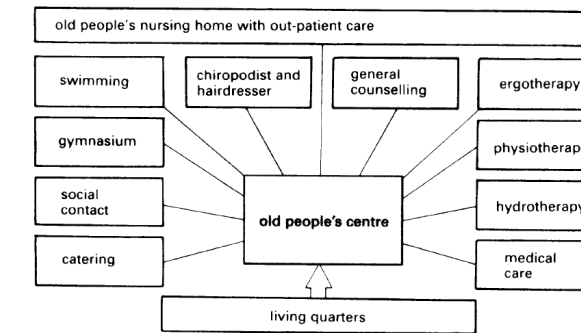
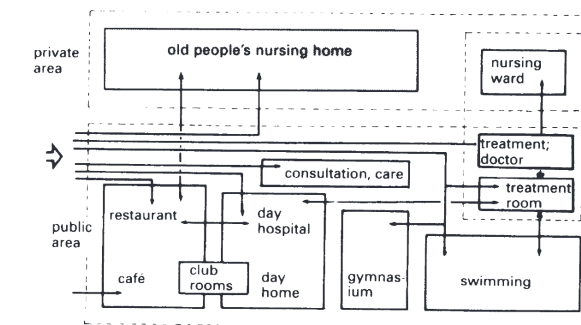*Figure 44: Functions in a nursing home*

In order to determine the program, there is looked to relationship schemes for hotels and nursing homes. The accommodation has to be entirely for elderly people, provided with all amenities and adaptations. It will be an accommodation accessible for all people above eighty years of age. The project should be for that reason not only wheelchair accessible, but more than that.

The accommodation has to be easily accessible, twenty-four hour care must be provided. The program of the accommodation should promote more social contact for the increasingly loneliness many elderly have. Research of Toepoel (2011) has shown that elderly people who attend popular forms of entertainment, such as music concerts, cabaret and cinema show, appear to be happier and less lonely. In contrast to elderly who prefer to go to theatre, opera, ballet and visit an art gallery or museum.

Figure 45: Functional diagram nursing home

PROGRAM

After some research, the program was set up. There will be around thirty bedrooms, thus a maximum of sixty visitors at the same time. When the group is bigger, the stimulation for more social contact is harder. The program of this accommodation can be compared with the program of a cruise ship. All the entertainment is inside and they do not have to leave the building to be entertained. There is a theater, restaurant, swimming pool, but also a hair salon, pedicure and manicure. There also will be a shop, where they can buy souvenirs, small groceries and it serves as a drugstore.

After defining the program, small plans were made. In this way, the amount of square meters were determined. It could change later on, but it gives for example an idea how many seats the theater and the restaurant will have.
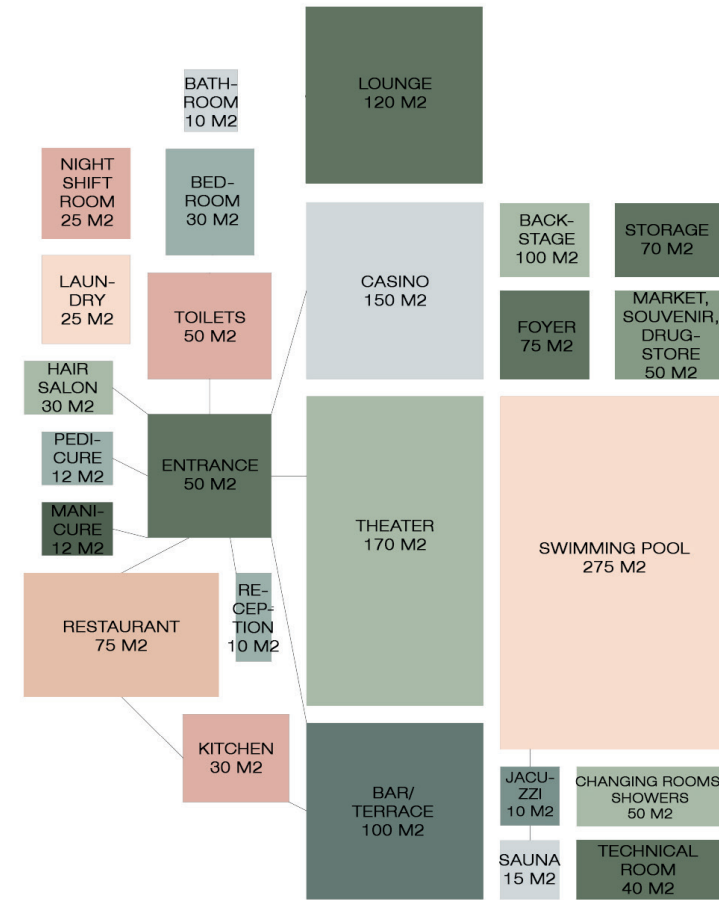
Figure 46: Program organization
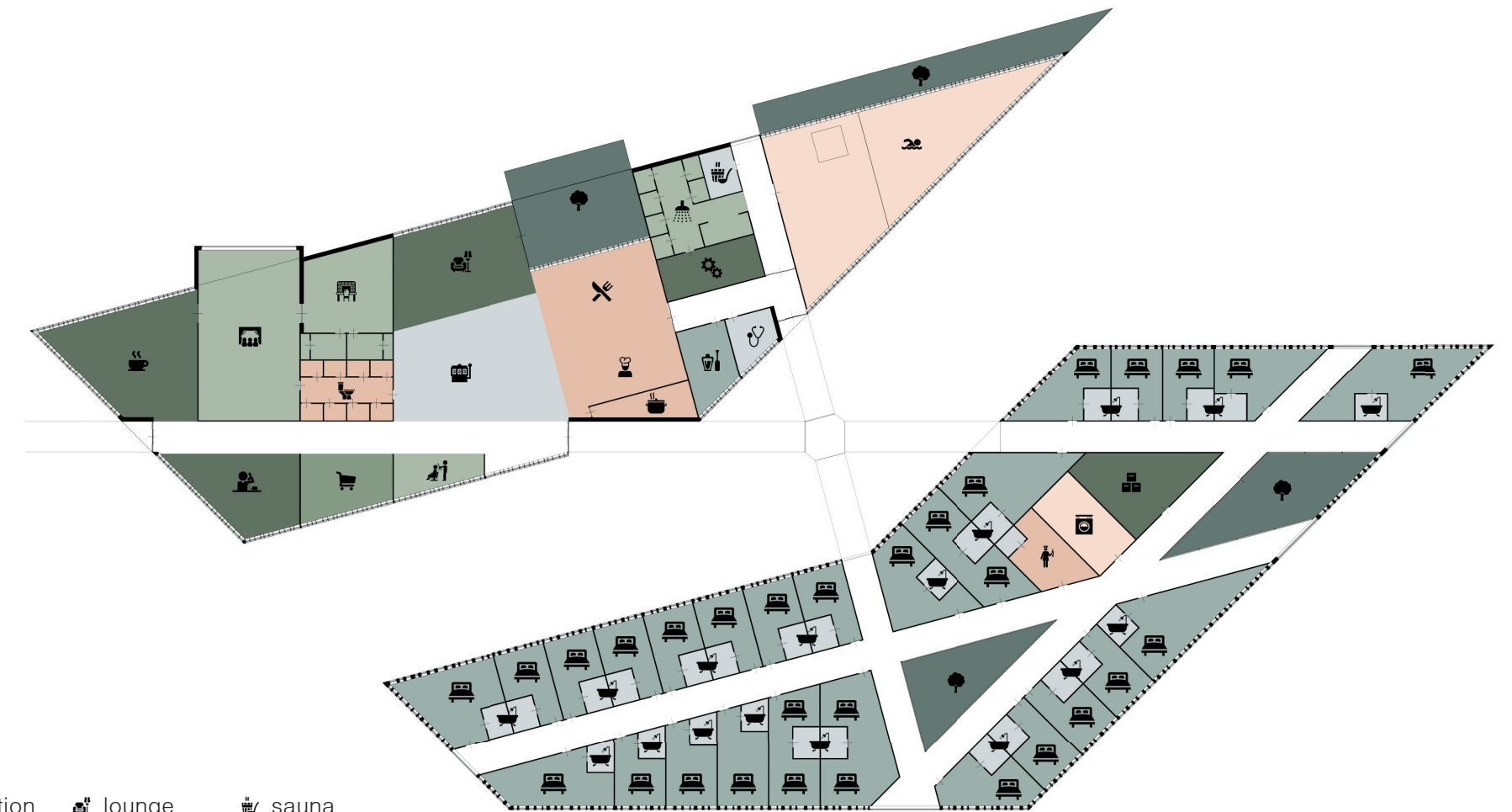
Figure 47: Program in plan

👥 reception   🛋 lounge   🧖 sauna
🍴 foyer   🌳 outdoor   🚿 changing rooms
🎭 theater   🍽 restaurant   🔧 technical room
🎬 backstage   🍳 kitchen   🛏 bedroom
🚻 toilets   🍲 preparation   🛁 bathroom
🛒 shop   💅 manicure   🧺 laundry
✂ hair salon   🩺 doctor   🚹 night shift room
🎰 casino   🏊 pool   🗄 storage
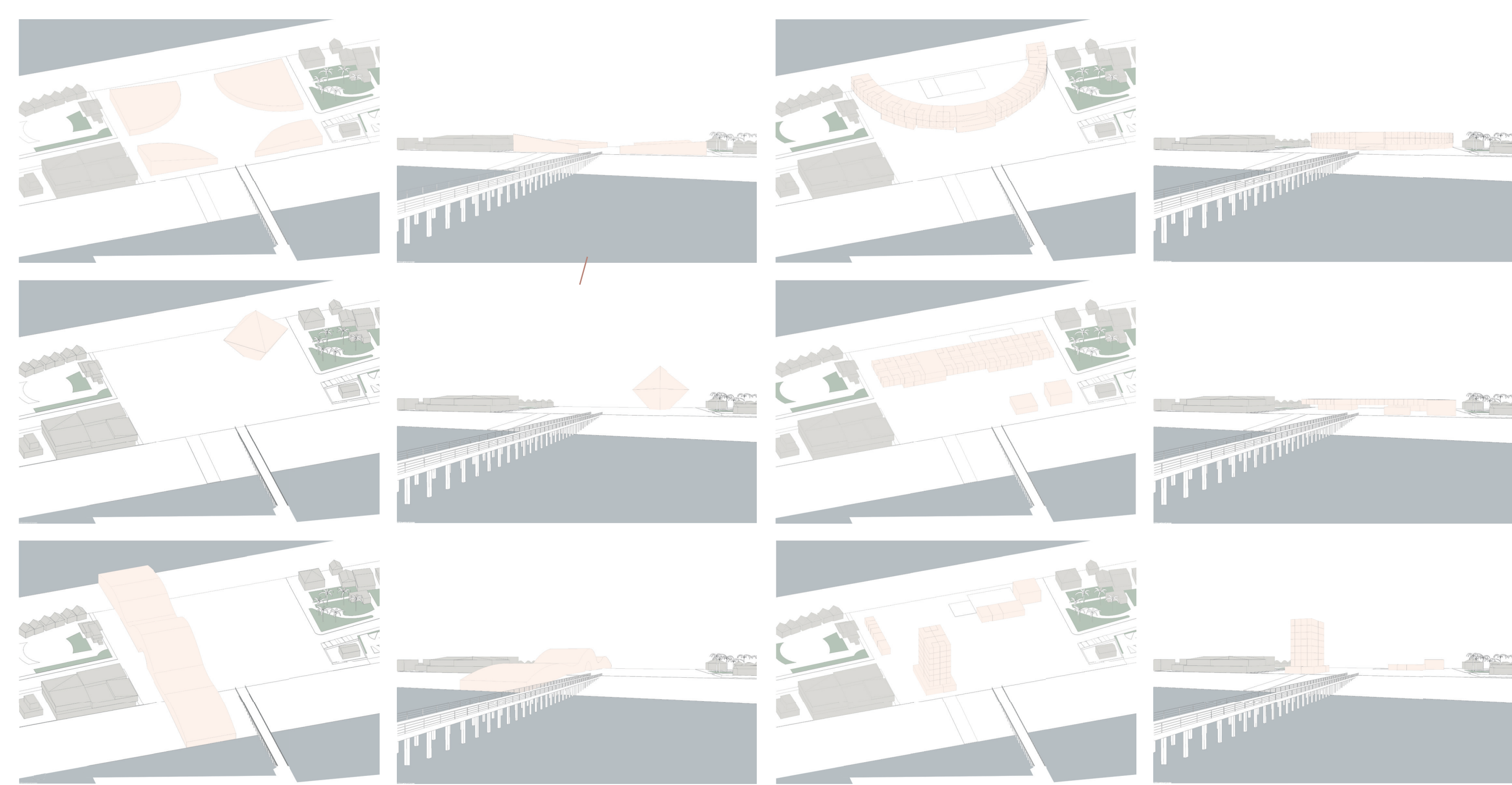
SHAPING STUDY

The first idea was to build on the parking lot itself. It is the center of the island, so it is often a busy spot. This page shows the different shapes that are tried. After visiting the spot, the conclusion was made to do something with the tide difference. To build close or in the water was more logical than using the parking lot. On the next page, study models are tested.

<−− Figure 48: Shaping study
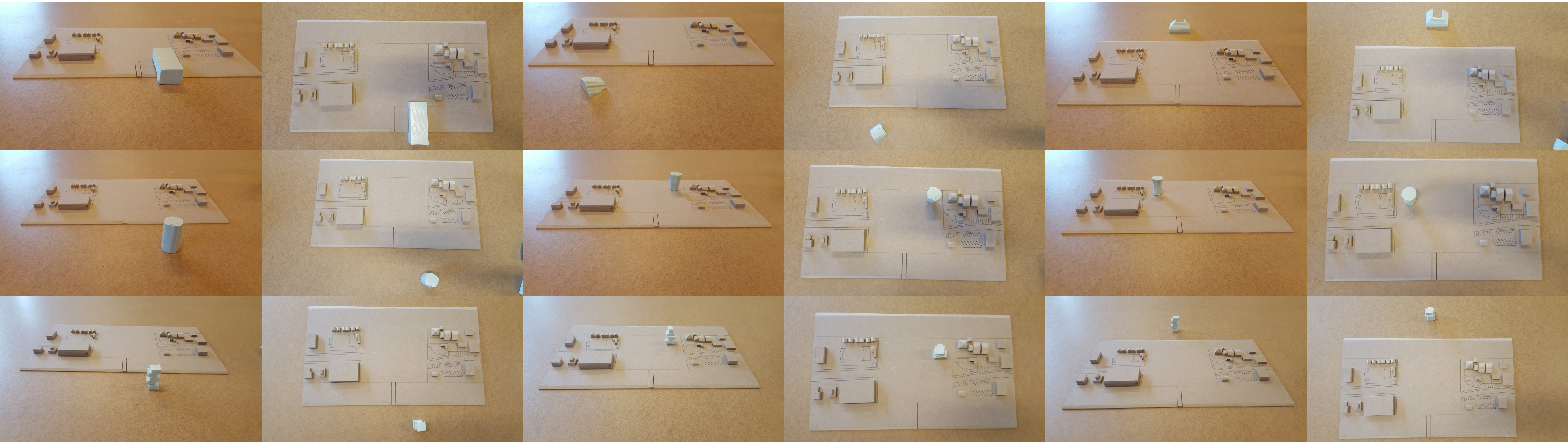
Figure 49: Study models

Figure 50: Natural Park of Ria Formosa
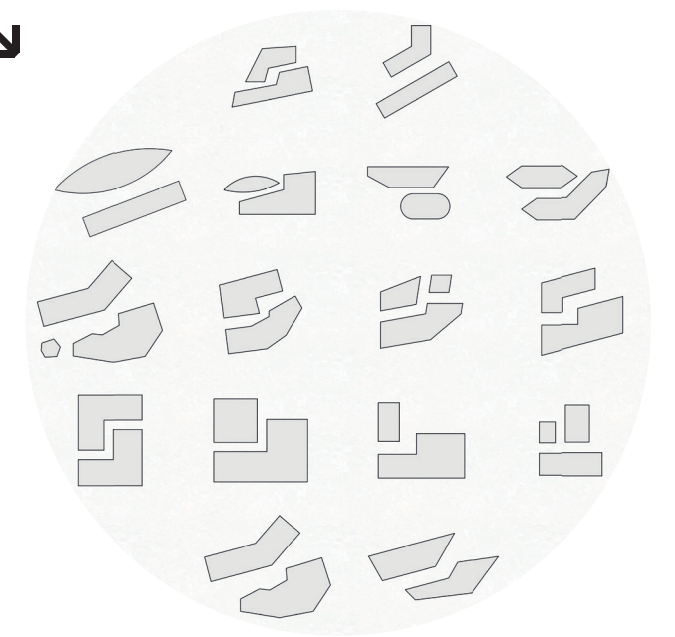
Figure 51: Analysis natural park –>
abstract islands

FINAL SHAPE 2D

After decided to build in the Natural Park of Ria Formosa, the idea to go with the natural organic shapes of the islands was created. Looking and sketching over the pictures that were made during the trip, some shapes were formed.

Some shapes were developed further with the program in it and there were made some plans. This plans were not satisfying the idea of the ultimate holiday destination. However, it remains a building and not an island. So, abstract shapes of islands were made on the location that was chosen.

Figure 52: Final shape in surrounding –->

CONCEPT & DESIGN
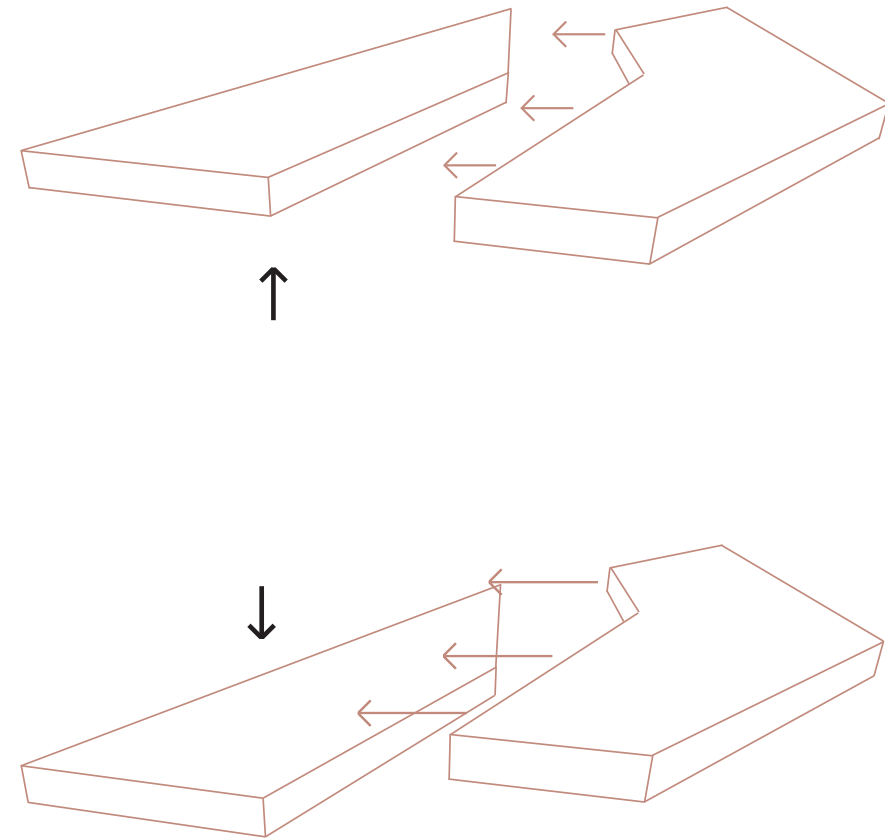
Figure 53: Diagram high and low tide

CONCEPT

The accommodation consists of two parts, the public and the private part. In the private part, all the rooms are situated, and in the public part, the public functions as the restaurant, theater and swimming pool can be found. The difference in public and private can be observed in the plan, which is more clear and closed in the private part and more open in the public part, as well as in the façade.

Since elderly are no longer really active, a passive form of entertainment is added to the design. Namely the real feeling of the tidal difference. The private part with the rooms stays on the same, dry level, while the public part moves with the tidal difference. In this way, the view of the rooms will be blocked when it is high tide, and with low tide, the island and sea are visible again.

Figure 54: Diagram open and closed building
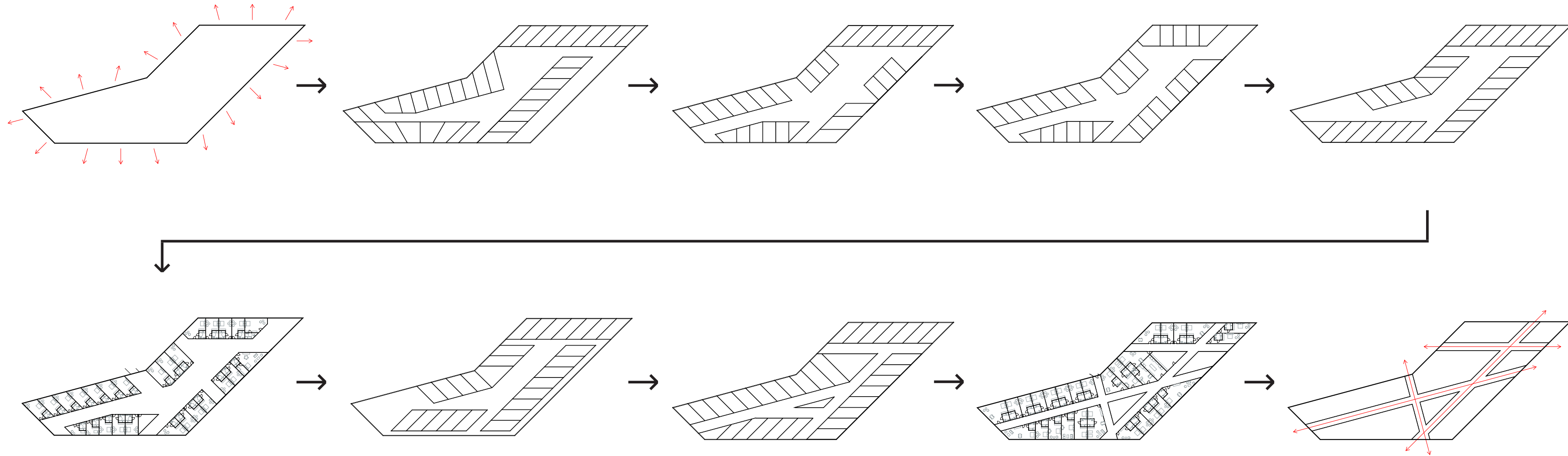
DESIGN STEPS

At the spot, every sight gives another view. There is the sea, the natural park, the island, the airport, the cities and the golf course. The different views are important in this project, assuming that the elderly will stay in the accommodation. Therefore, the starting point were these sightlines for making the floor plan with the bedrooms.

Figure 55: Design steps private part
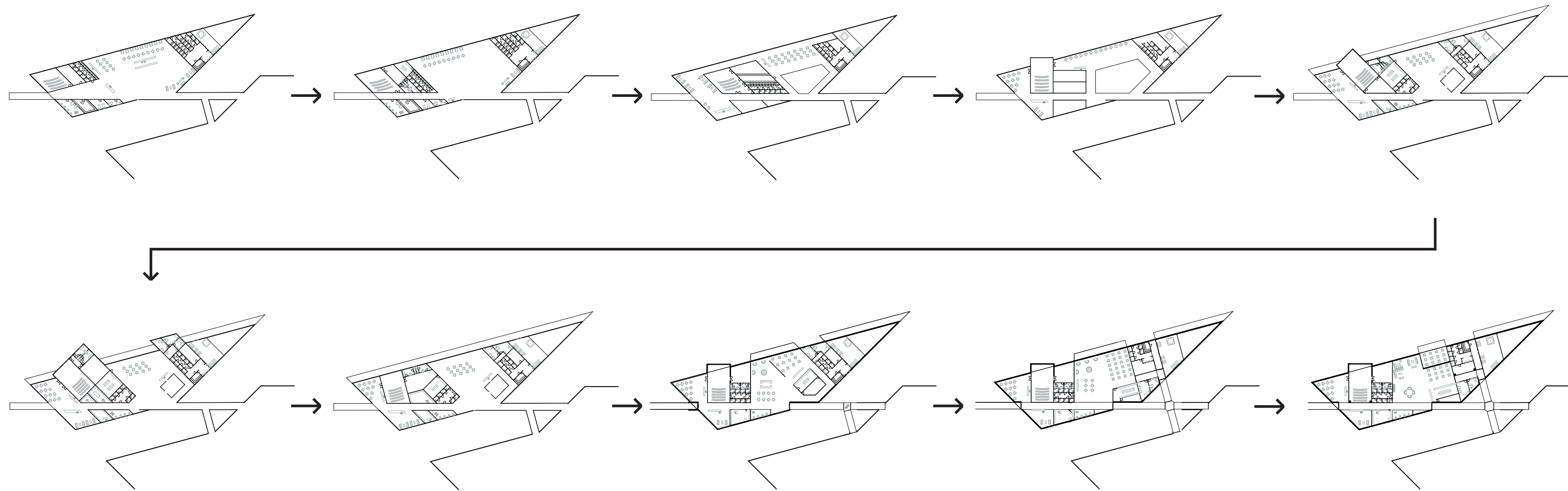
DESIGN STEPS

The building with the public functions is designed with a different approach. The main purpose of this floor plan is to stimulate social contacts of the elderly. An open floor plan was for that reason recommended. The clear sightlines in the other parts floor plan are shown in this floor plan in slightly smaller dimensions, because one can enjoy the view from almost every corner. However, the path to the building, which goes further within the building to the other building, is visible. Eventually it has become the floor plan with a covered outdoor space.

Figure 56: Design steps public part

Figure 57: Floor plan private
1:250
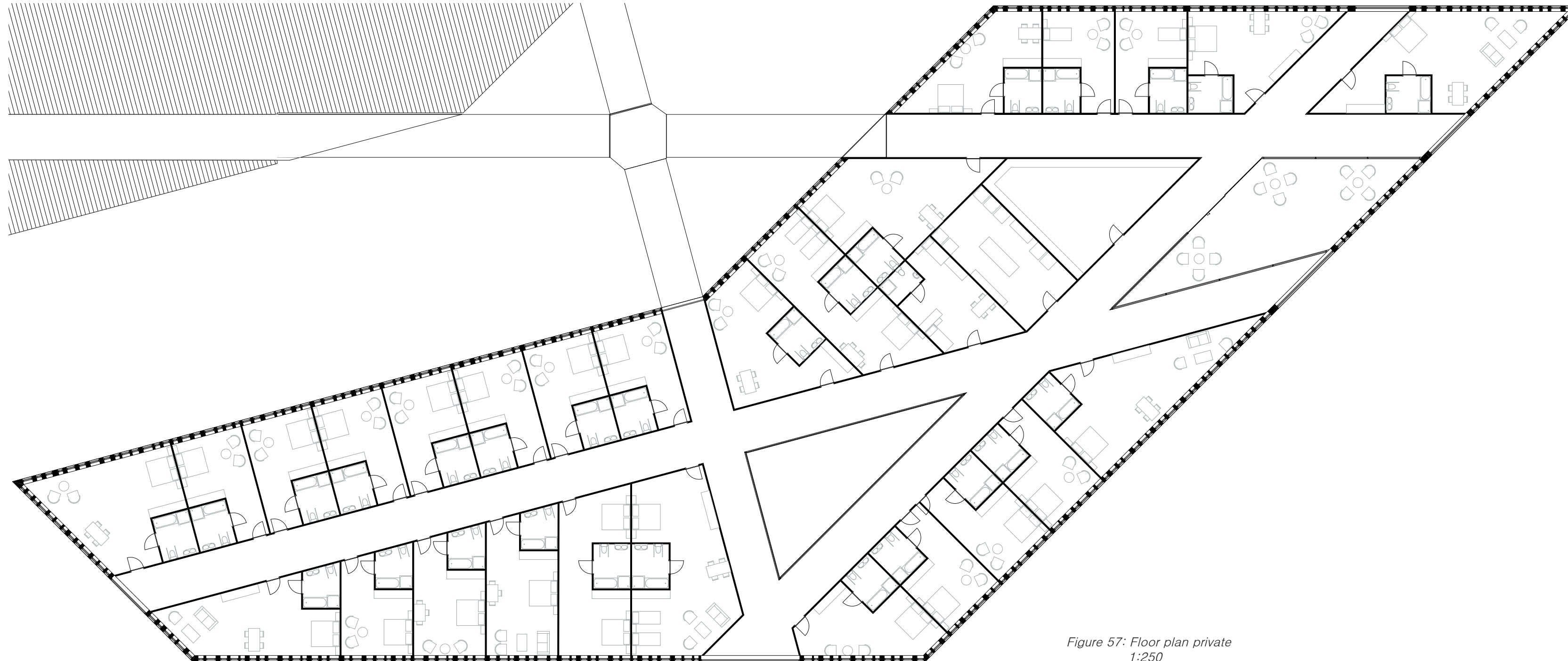
FLOOR PLAN
PRIVATE

As described before, the sightlines were important in this floor plan. These paths make it possible to enjoy every view point for every visitor. The paths also ensure that there are multiple routes. In this plan there are two patios, one can be used as an outside space to enjoy the sun.

In total, there are twenty-seven rooms, of which twenty-two are double rooms, two single bedrooms and three times four-person rooms. The rooms are not spatially designed, for the reason that the visitor is encouraged to go to the public areas where they can meet other guests. Furthermore, in this plan is also the laundry and a storage situated and a room for the night shift, which has their own bathroom as well.

Figure 58: Floor plan public
1:250

In this floor plan, all the public functions can be found. When walking the path that goes through the building to the private part, one pass first the reception. After that, the shop can be found. Here are souvenirs for sale, small groceries and a drugstore. Next to the shop, a hair salon is situated.

Furthermore, there is a theater with fifty seats. In front of this theater there is a foyer located with a bar. The theater can be used for various programs, such as music evenings, drama shows, movie nights, but also for lectures of the environment and excursions. Next to the theater a storage is placed for costumes and musical instruments, also two dressing rooms can be found.

The wheelchair accessible toilets are accessible from both the theater and the large open space, where the casino, the lounge area and the restaurant are situated. The restaurant has an open character, with the open bar and kitchen. There are forty-eight seats inside and the same amount of seats covered outside.

From the other path from the private part, the swimming pool can be reached. The water of the infinity pool has the same level as the water from the natural park, because the building moves with the tidal difference. There is no ladder to enter the water, as the slope slows down slowly. In this way, the swimming pool is also easily accessible for people with a wheelchair. Connected to the swimming pool, there is a jacuzzi and a sauna. Also changing rooms and toilets can be found as well as the showers and the technical space for the swimming pool. In this area, there is also a house doctor and manicure and pedicure.

FINAL SHAPE 3D

Different angles of the slope have been tested for the roof. Also the raised roof for the paths undergone several slopes. In the end it has become the variant with a horizontal roof above the paths and different angles of slope for the roofs above the rooms. The idea was to use the "island idea" in an abstract way, so the angle between the wall and roof is not ninety degrees, as it is also not the case in islands.
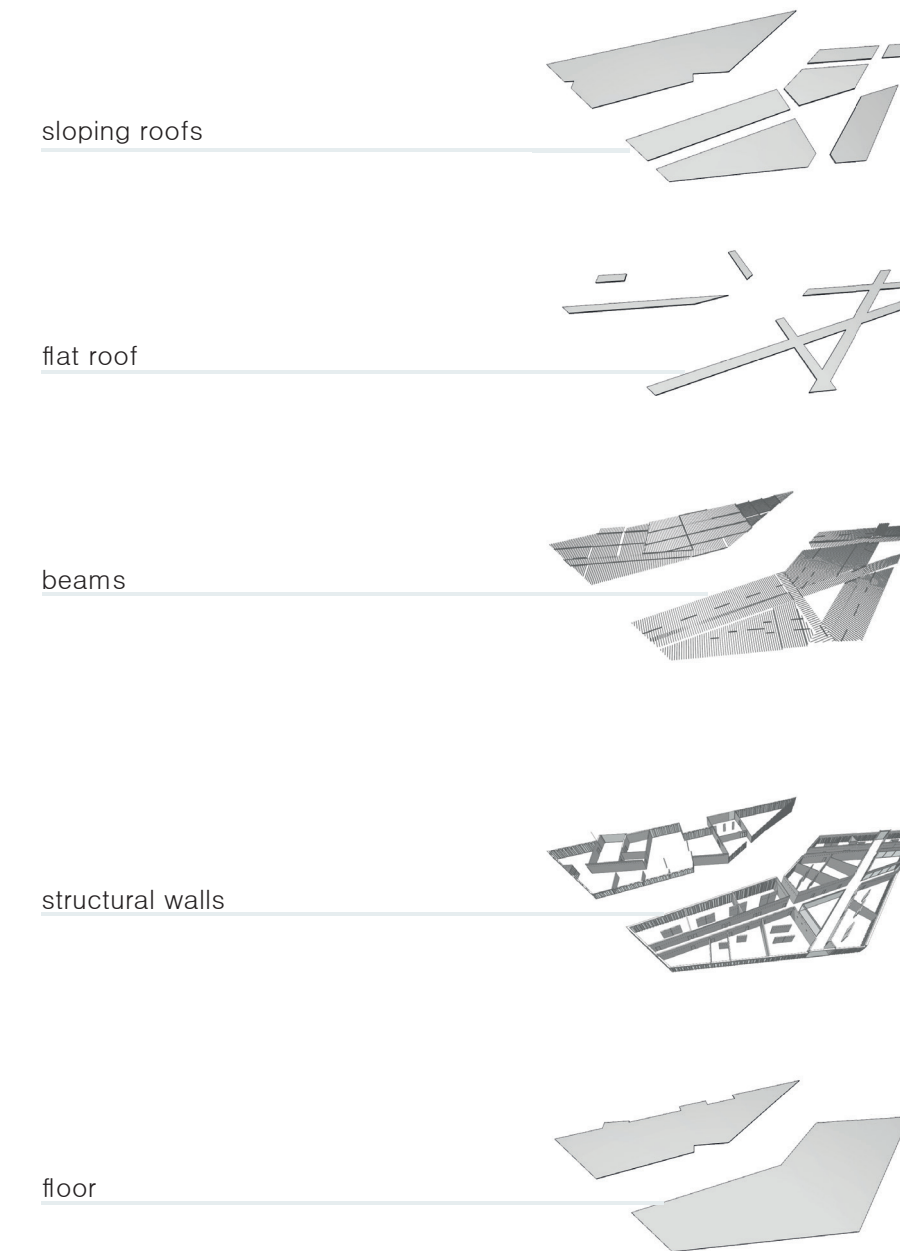
Figure 59: Final shape

STRUCTURE

sloping roofs

flat roof

beams

structural walls

floor

The roof is carried by beams, which are supported by the exterior walls and the structural inner walls. The maximum span is thirteen meters. The exploded view (figure 60) shows the structural elements of the building.

Figure 60: Exploded view
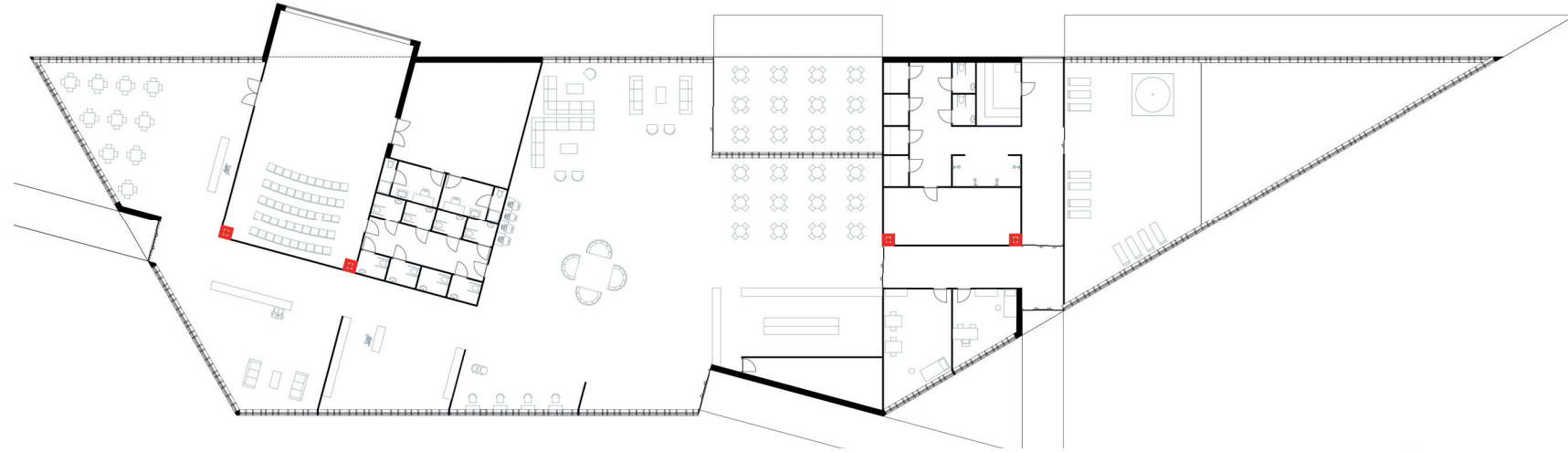
Figure 61: Location of the poles
1:500
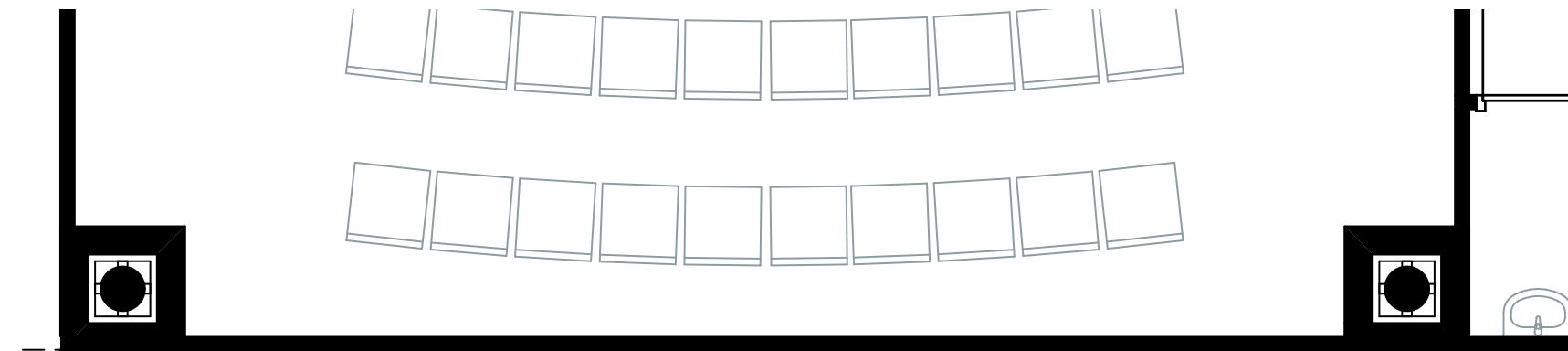
Figure 62: Mooring system in plan
1:50

MOORING SYSTEM

Many houseboats use a mooring system to keep the boat in place (figure 63). The public building in this design can be considered as a houseboat, it is driving as well and must also be kept in place.

Steel poles are hit in the ground in the water and pile brackets are mounted to the concrete casco of the boat. Two poles are often used in houseboats, but because of this larger building, four poles are used in this project (figure 61). The pole bracket, attached to the pole, moves with the variable water levels. The poles are integrated into the building, in this way it is not visible from the outside (figure 62).

Figure 63: Mooring system
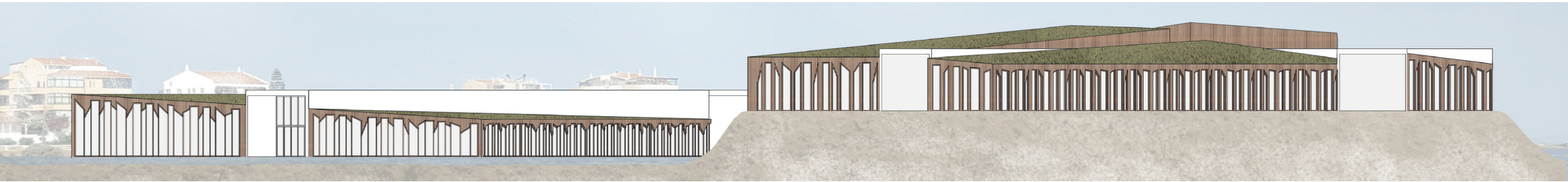
Figure 64: East elevation low tide
1:500
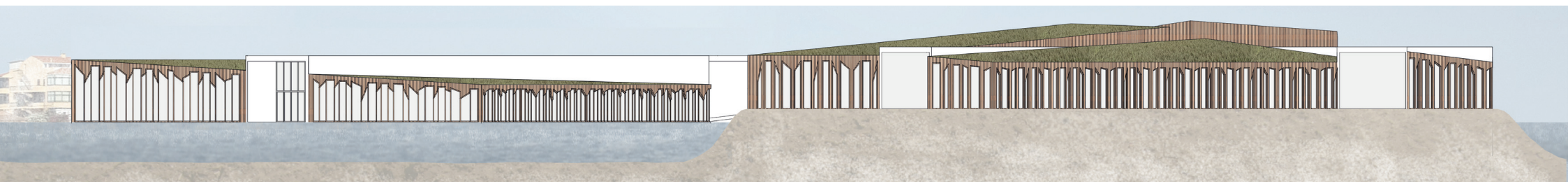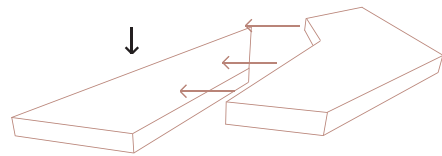
Figure 65: East elevation high tide
1:500
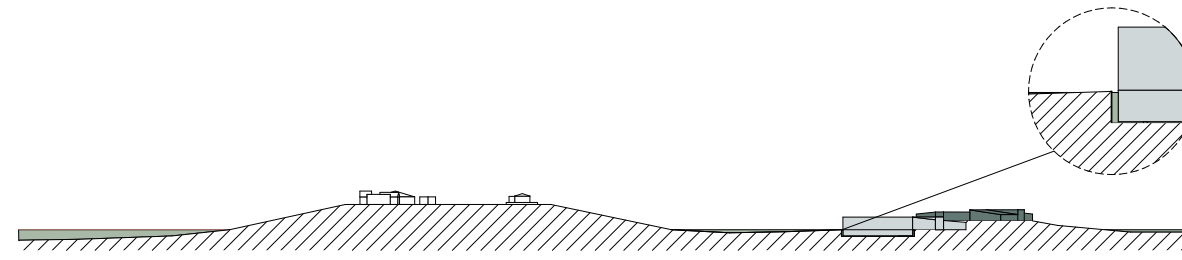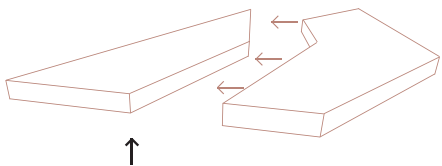
Figure 66: Section of the peninsula: low tide
1:2500
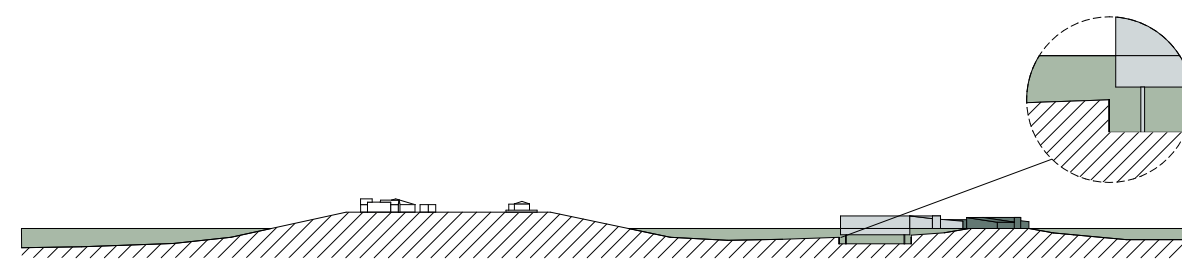
Figure 67: Section of the peninsula: high tide
1:2500

ELEVATIONS
HIGH & LOW TIDE

The area is characterized by the enormous tidal range. To give the elderly really the experience of the tidal difference, the design is placed in the natural park. The private building with the hotel rooms can be considered as a building, while the public building is more a boat, the building moved along with the tides. To make the building floating, a structural concrete box is applied under the building.

The position of the design in relation to the island and the sea can be seen in figure 66 + 67. The principle of the system is also explained in there with the excavated box and the poles that hold the building in place.
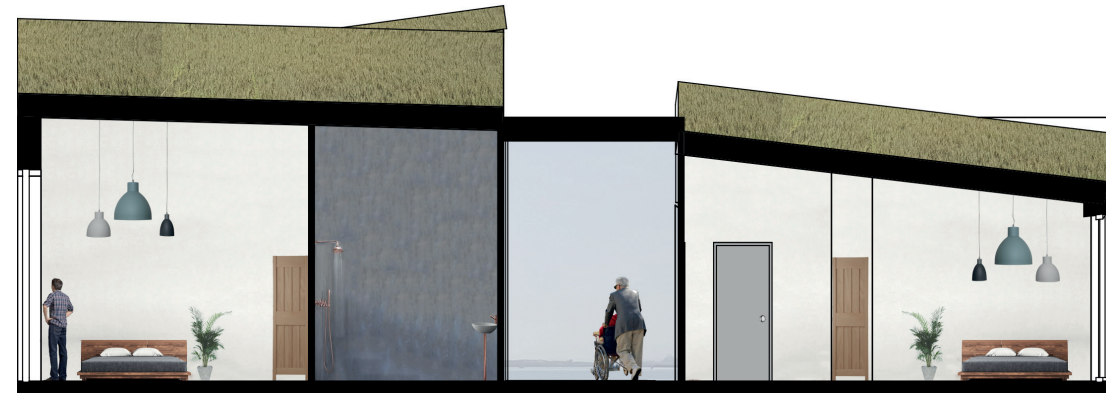
Figure 68: Materials private building

Figure 69: Materials public building
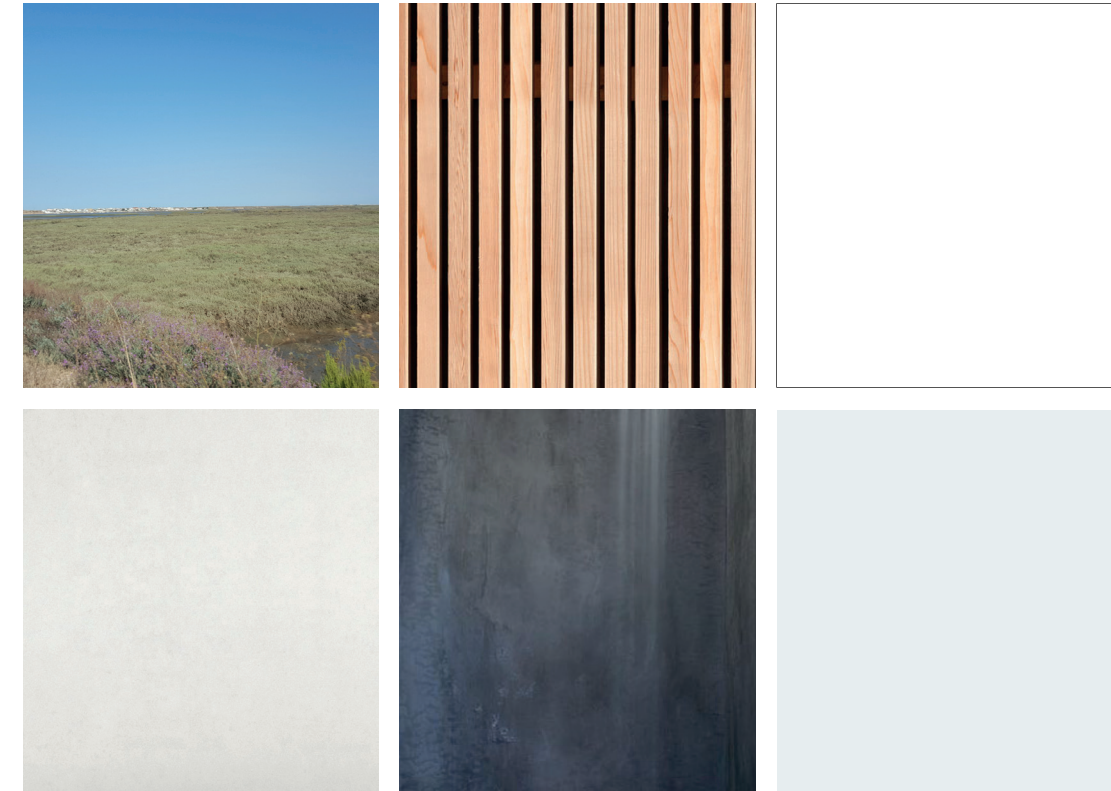
Figure 70: Materialization

MATERIALS

As Faro Airport is the main airport of the region and is as a point of entry to southern Portugal, the roof of this building is perhaps the most important element, because the natural park is well visible from the sky. The picture in the left corner of figure 70 shows the situation at low tide. This "sedum" is applied to the roof, in this way the building is not a disturbing element in its environment from the sky.

The façade consists of western red cedar slats. It is a durable, lightweight, sturdy, resilient type of wood and very resistant to deterioration and weathering (Centrum Hout Almere, 2003). The paths that go from the bridge to and through the buildings get the same look as the bridge. In this way, the street is extended through the building.

The two separate buildings have many similarities from the outside, while the interior of these two has a large contrast. The materials in the private building are more sober (figure 68), while the materials in the public building are more extreme. The wall at the restaurant consists for example of wooden slats (figure 69).
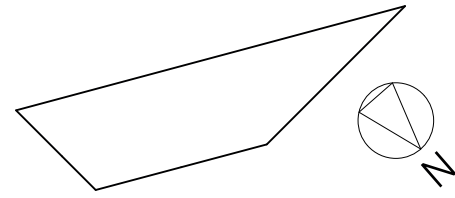
Figure 71: Exterior view ––>

Figure 72: Public building
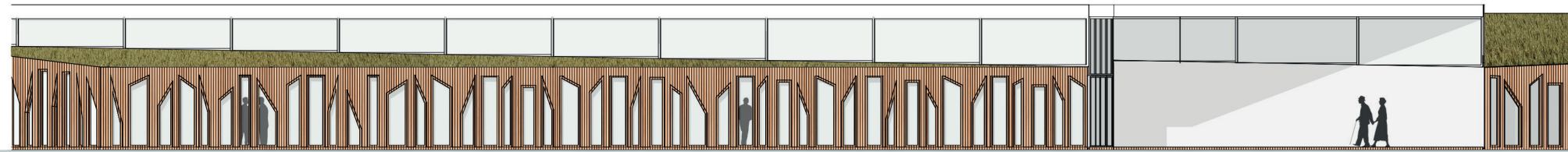1:2000

Figure 73: East elevation
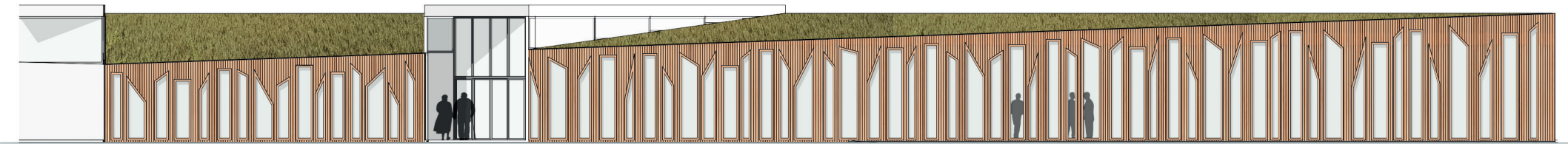1:200

Figure 74: North West elevation
1:200

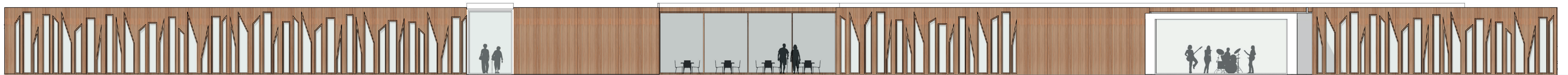Figure 75: North elevation
1:200

Figure 76: South East elevation
1:200

ELEVATIONS
PRIVATE BUILDING
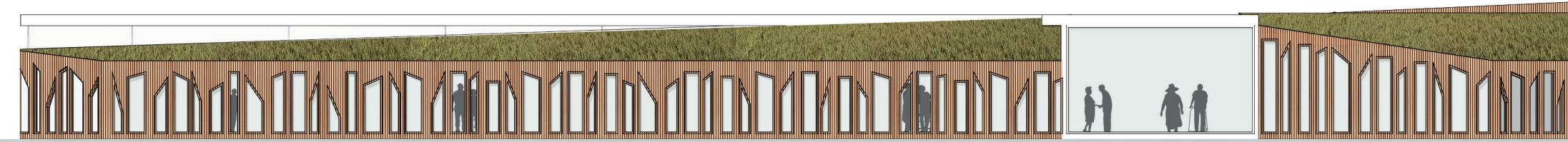

Figure 77: East elevation
1:200

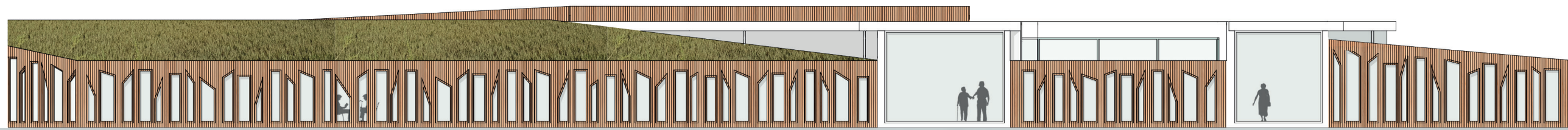Figure 78: North East elevation
1:200

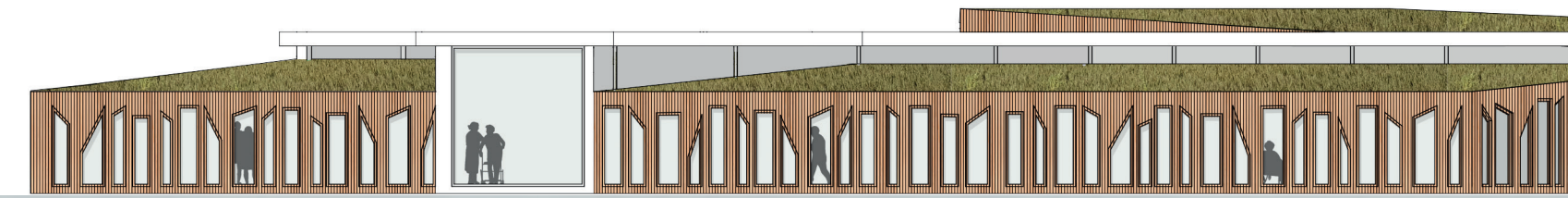Figure 79: North elevation
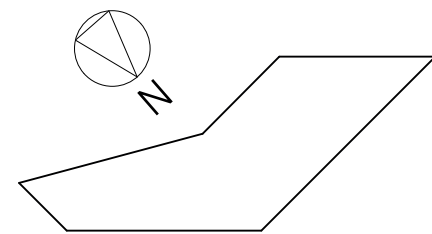1:200

Figure 80: South West elevation
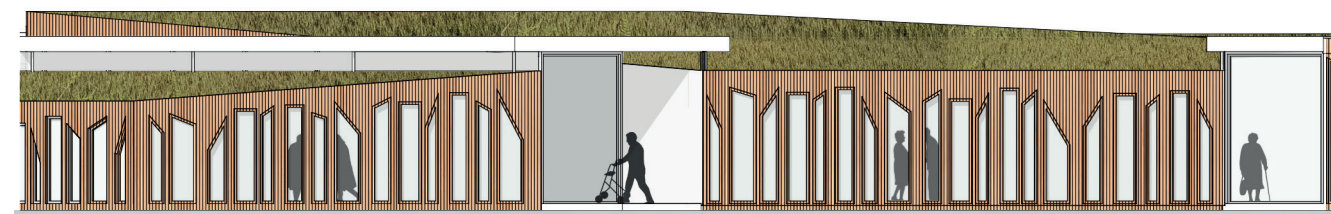1:200

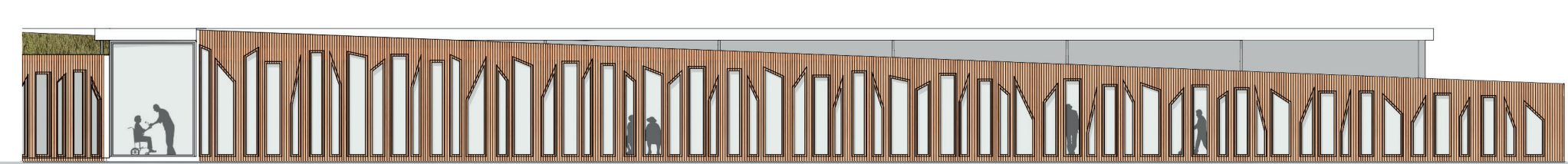Figure 81: Private building
1:2000

Figure 82: South elevation
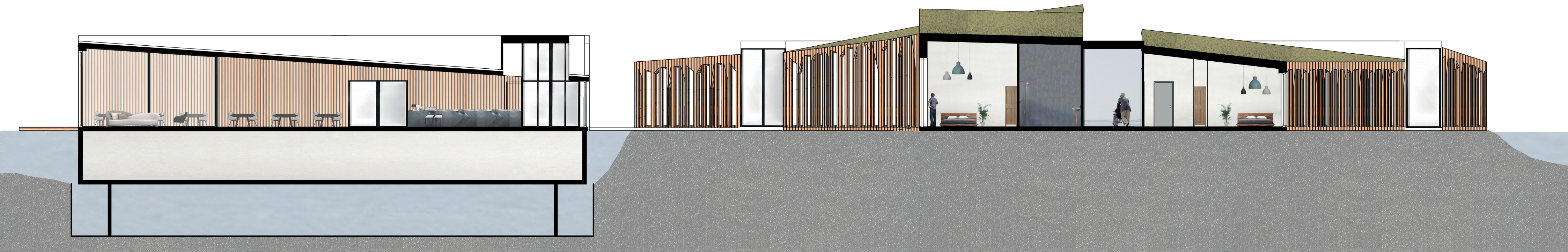1:200

Figure 83: South East elevation
1:200

Figure 84: Section through both buildings
1:100
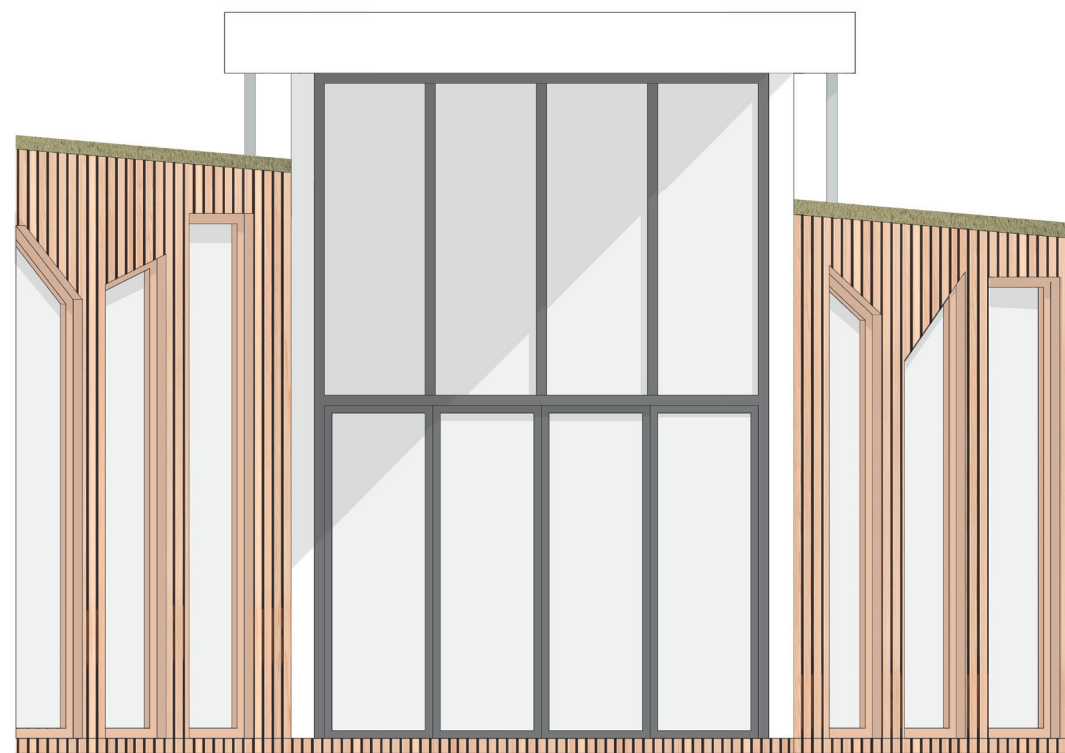
Figure 85: Elevation fragment
1:50

TECHNICAL SOLUTIONS
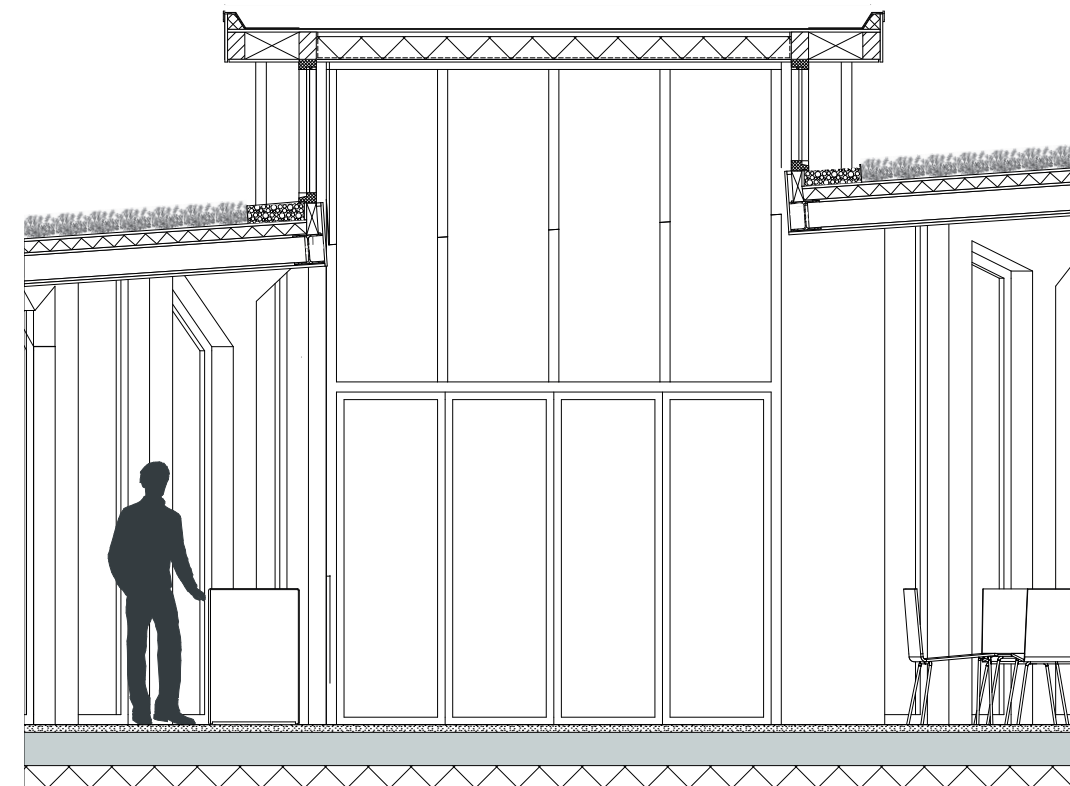
Figure 86: Section fragment
1:50

The section façade fragment shows the principle of the corridors, which are frequently used in the design. The sloping roofs consists of sedum as shown in figure 86. The structure of the building consists of wooden beams and columns. Wooden beams only span a maximum of 6,5 meters, for that reason HEA beams have been used to bridge the larger spans. However, the use of steel is minimized and only used indoors, since steel does not react in a good way with the salt water of the surrounding.
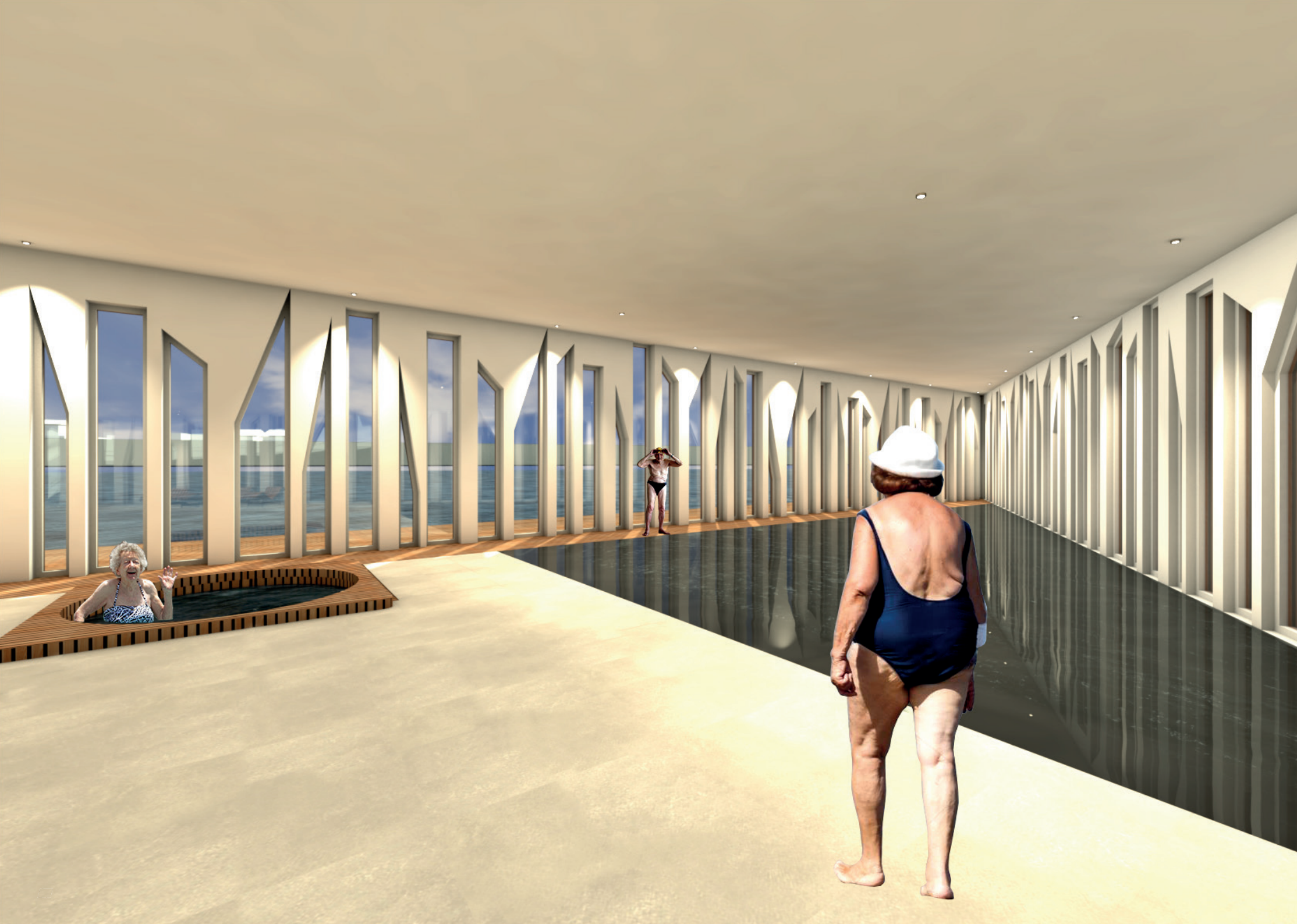
CONCLUSION

The design of 'the tides hotel' is a result of nine months graduation studio The Future of Leisure. Three months with general research of leisure activities in different continents and searching for the definition of leisure. After this general research with the whole group, the individual part started. The study and the design as a result of it, explored how this leisure concept could be a part of the future of the elderly. During this design approach, several aspects have been investigated to understand the location of the leisure concept and what the elderly of the future need. There can be concluded that the need of another surrounding and good weather contribute positively in the lives of the elderly.

A research to the ideal destination was made through interviews with the elderly of today and information was collected from different travel agencies. It turned out that a city on the coastline of Spain or Portugal will be the most ideal. The temperature in that area is pleasant, even in the winter months and it will be no longer than three hours of flying. An important aspect to the search of the destination was that it has to be very accessible. The step to go on holiday is in that way reduced somewhat. Faro came out as the perfect destination. From almost every airport in the Netherlands and surrounding there are flights to Faro airport. There are cities that can be visited, there is a golf course nearby and there is an enormous natural park.

Nowadays there is already the problem of the increasing loneliness of the elderly. This design encourages social encounters between the elderly by making the hotel rooms compact and sober. The open character of the public building with all entertainment there stimulates them to meet each other. For the reason that elderly are not very active anymore, a passive form of leisure has been added to the design which is very characteristic of the area. There is a tidal difference of three meters in the natural park. To emphasize the difference between the public and private building, the public part moves with the tide difference, while the private part is a fixed object in the water.

With all these ingredients a unique hotel is created. A hotel especially for eighty years and older, which does not exist yet and also a special hotel because of the interaction with the natural park.

<-- Figure 87: Impression of the entrance
<-- Figure 88: Impression of the corridor in the public building
<-- Figure 89: Impression of the outdoor terrace
<-- Figure 90: Impression of the hotel room
<-- Figure 91: Impression of the swimming pool

REFLECTION

The studio started with defining the definition of leisure. Prior to this research it was already clear that leisure is a broad concept. However, after research to the definition it was still hard to define. Leisure is personal and it is different for everyone.

After we individually researched what leisure is, we started analyzing leisure in different continents in groups. In this part, we had to decide what the subject of our own project would be. The switch from group work to the personal design part was hard for me. In the beginning I struggled with the subject for a long time. The leisure concepts that we analyzed with the group did not suit me very well. I was thinking about the future, which things will change, and came up with the idea to design a leisure building for the elderly. Looking back, I do not understand that I was doubting

for such a long time, because this subject fits me very well. I tried different locations and in the end I am super excited with Faro. It is a beautiful place with a lot of possibilities. But at the same time, this was also my second obstacle. The location was so free, that there were almost no boundaries. Visiting the spot was very useful and brought me new ideas.

Personally, it was hard to deal with the freedom of leisure as a broad concept, the future aspect and choosing a location all over the world. There were many things that had to be determined by ourselves and it was scary and difficult to make choices. My process did not go very smoothly because of that, but in the end I am happy with the result. It would not have been possible without the great tutors and fellow students, I am really happy that I was part of this studio.

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FIGURES

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Cover: Retrieved May 2, 2017, from http://images.pausecafein.fr/images/cafein/2016/02/sexualite-epanouie-couples-60ans/couple-age-amour.jpg

Figure 4: Senior skydiver. Retrieved April 29,2017, from http://cindybrussell.com/wp-content/uploads/2017/04/Senior-Skydiver.jpg

Figure 4: Senior gymnast. Retrieved April 29, 2017, from https://services.sportourism.id/fileload/johanna-jpg-kNKZ.jpg

Figure 4: Senior disc jockey. Retrieved April 29, 2017, from http://3.bp.blogspot.com/-Sri01x_Zoes/VWs4WqGirHI/AAAAAAAAy50/h4YdqIj1KTE/s1600/6.jpg

Figure 5-8: Life expectancy. Retrieved June 25, 2017, from http://www.eengezondernederland.nl/Een_gezonder_Nederland/Highlights/Trends_in_de_volksgezondheid

Figure 9: Impression of a future city. Retrieved October 2, 2017, from http://www.benedict1.com/digitalartist/special-effects/large/special-effects21.jpg

Figure 10: Care on holiday. Retrieved October 2, 2017, from http://www.townbreakstirling.co.uk/media/1004/townbreak-carers.png

Figure 11: A group of 65 year olds. Retrieved October 24, 2017, from https://nbocdn.akamaized.net/Assets/Images_Upload/2013/11/29/65-jarigen.jpg

Figure 12: A group of 80 year olds. Retrieved April 30, 2017, from https://www.rawepo.be/images/stories/NIEUWS/2014/10-oktober/80jarigen_okra.jpg

Figure 13: Holiday destinations of elderly nowadays. Retrieved October 26, 2017, from http://facultyofhomeopathy.org/wp-content/uploads/2015/07/multimorbidity.jpg

Figure 15: How elderly think about holidays nowadays. Retrieved October 24, 2017, from http://yoursightmatters.com/wp-content/uploads/2013/01/vision-impaired.jpg

Figure 20: Faro in its surrounding. Retrieved October 2, 2017, from http://www.google.nl/maps

Figure 22: Ilha de Faro. Retrieved May 31, 2017, from https://lh3.googleusercontent.com/-1fSAqUaOdoY/TXq9jmnq-TI/AAAAAAAAbU/W3KgqFWohxY/s1600/PRAIADEFARO50.jpg

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Figure 24: Ilha de Faro. Retrieved May 31, 2017, from http://in-the-algarve.com/wp-content/uploads/2013/02/cabanas-tavira-algarve.jpg

Figure 25: Ilha de Faro. Retrieved May 31, 2017, from http://algarve-portal.com/imgs/uploads/Praia-de-Faro-Mar.jpg

Figure 26: Ilha de Faro. Retrieved May 31, 2017, from http://discoverportugal2day.com/wp-content/

Figure 27: Surrounding of Faro. Retrieved May 31, 2017, from http://www.google.nl/maps

Figure 37: Shoreline evolution. Carrasco, A. (2012). Natural and human-induced coastal dynamics at a back-barrier beach

Figure 38: Water level Faro. Retrieved August 31, 2017, from https://nl.windfinder.com/tide/ilha_de_faro

Figure 43-45: Organizational diagrams. Neufert, P. (2003). Architects' Data

Figure 52: Final shape in surrounding. Retrieved May 31, 2017, from http://www.google.nl/maps

Figure 63: Mooring system. Retrieved October 2, 2017, from https://watersportcentrumarnhem.nl/wp-content/uploads/2016/07/Watersportcentrum-Arnhem-Scheepsaanpassingen-3-Afhouder-en-aanmeermogelijkheidrijvend-terras.jpg