

THE GLADE

HEALTHCARE ARCHITECTURE - FUTURE VISIONS FOR HEALTHCARE, HOUSING & WORK - 2019.01.14
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The task

The assignment that our studio have been given have been to present a range of proposals of a new psychiatric facility for the Kalmar County Council to be located in Västervik. The present premises does not support the treatment and healing of the patient as it should do due to old and worn-out buildings.

Architecture and the built environment has great impact of how people feel and therefore also how they act. Well-thought and good design of psychiatric facilities is consequently extremely important. It is said that "appropriate care facilities for psychiatry are as important as advanced medical-technical equipment is for the somatic specialties" which enhances this importance.

The thirteen proposals will be located at two different sites; one urban and one rural. The project that will be presented here is located at the rural site. The main reason for the decision of site is because of its green surroundings and close connection to different nature elements.

The program that the Kalmar County Council has been providing us with asks for approximately 9000 square meters excluding functional spaces such as passages and technical installations. The structure should include spaces for both inpatients and outpatients as well as both children and adults and one part of the structure should be dedicated for forensic psychiatry.



Sence of Coherence

CARE VISION

Many psychiatric patients in full-time care are deeply depressed, heavily distressed and desperate about their situation. The stress this implies can, in combination with stress in the department, create frustration and aggressive behavior. How can we reduce this stress and make a good healing environment?

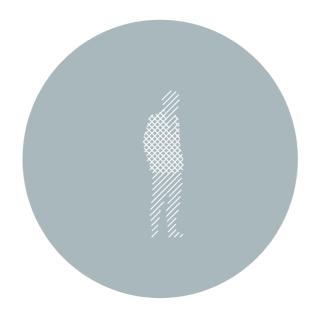
SALUTOGENIC THEORY

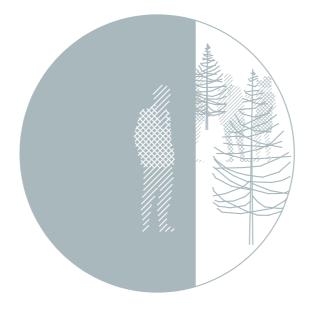
Aaron Antonovsky was a professor of medical sociology. He developed a theory and a research perspective that he called salutogenesis. Instead of asking why some people feel mentally bad he asked himself: what makes people remain mentally healthy? Antonovsky answered the question with SOC (sense of coherence).

Sense of coherence consists of three components:

- 1. Comprehensibility you perceive yourself and the outside world as structured, understandable and predictable. You have some understanding of how you and the environment work. No sense of chaos.
- 2. Manageability you have the resources needed to handle your environment, within yourself or in the surroundings. You have confidence in your own ability to solve problems. You do not see yourself as a victim but a master of your own life.
- 3. Meaningfulness you are involved in your own and others lives. You get something meaningful back through your participation.

These three together make us, according to Antonovsky, resistant to stress. Meaningfulness is the motivational component of the concept.







DESIGN VISION

Our vision is to create a healing environment that gives the patients a sense of coherence. By creating different types of space with more or less stimuli from people and nature, we want to make it easy for the patients to regulate and manage their own environment. That would enable the patients go step by step in a comprehensible way from an inward-directed engagement to an outward-directed engagement and from low well being to high well being.

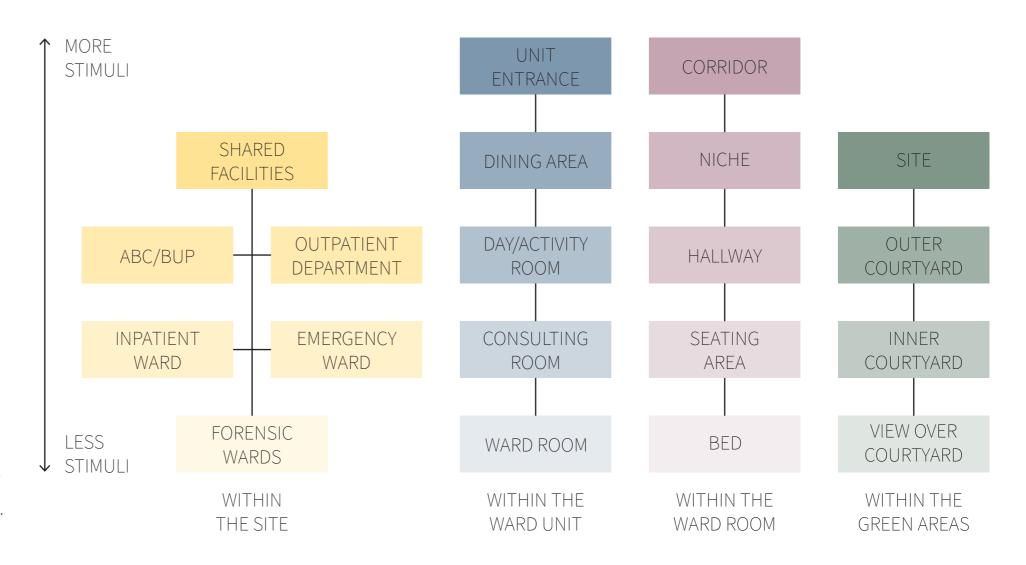
Design Strategy

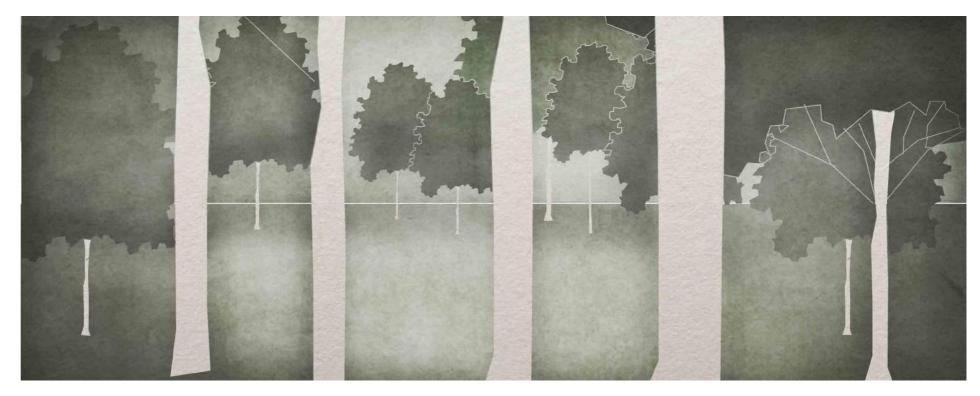
In order to actualize the design vision that we had in mind we have constantly worked with a gradient of the number of stimuli that a certain environment at a certain time give to the recipient. The escalation or de-escalation of impressions can be studied in various aspects of the building and in different scales.

The yellow part of the diagram to the right describe the amount of stimuli that we believe each part of the hospital needs. The shared building (which is the most public) needs and can handle the most stimuli and the forensic wards need the most privacy and least amount of stimuli.

This idea about a gradient from public spaces with a lot of stimuli to private spaces with a very limited amount of stimuli could be applied to different parts of the building. The blue part of the diagram shows how work in the ward units, the pink part shows it in the ward room and the green part in the outdoor areas.

A lot of inspiration has been taken from the phenomenon" glade". Which can be described as an opening between trees in a forest. The Swedish translation of the word glade has double meaning and can also signify "to open slightly" which also describes our design vision very well.



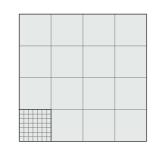


A GLADE = EN GLÄNTA ATT GLÄNTA = TO OPEN SLIGHTLY

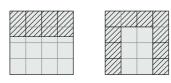
Building Structure

To ease the actual construction of the building the design has been made out of a grid of squares. The smallest unit is 0.6 x 0.6 meters which is a common space between beams and also fits most kitchen and bathroom appliances such as refrigerators and washing machines. 49 of these small squares create a lagers square with the sides 4.2 meters. This square is the one that determines where the load bearing pillars. 16 of these squares create a larger square that is 16.8 x 16.8 meters which is used for placing both ward rooms and consulting rooms in.

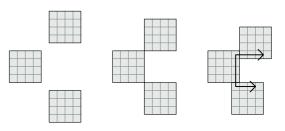
Three of these large squares with ward rooms together with a smaller square for public functions create a ward unit. The space in between the four buildings create an inner courtyard - or a glade. Two ward units mirrored to each other and connected with a larger entrance building form a department. The space in between the two wings forms an outer courtyard.



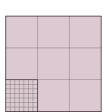
THE INITIAL
SQUARE
BUILDING
(4.2 x 4.2 M)



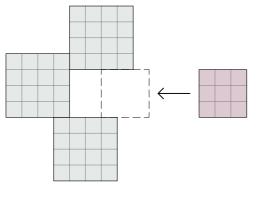
WARD ROOMS AND CONSULTING ROOMS



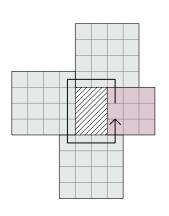
A TRIO OF SQUARES CREATING A CLUSTER



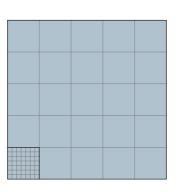
SMALLER BUILDING FOR PUCLIC FUNCTIONS (12.6 x 12.6)



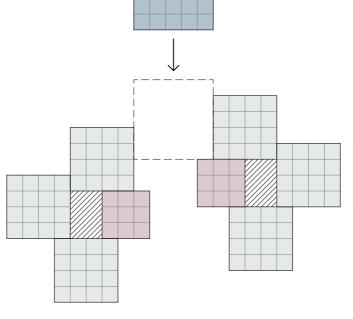
CLOSING THE CIRCLE



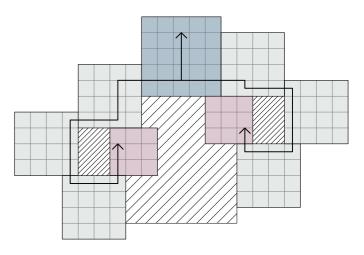
THE BUILDING ITSELF FORMING AN INNER COURTYARD



LARGER ENTRANCE BUILDING (21.0 x 21.0)



DOCKING AND CONNECTING TWO WARD CLUSTERS



A SHARED OUTDOOR YARD

The site

Today you mainly approach the site by car from the E22 road or by foot by the walking paths. In the near future there is a big chance the site will be more easily accessible since a new access road is under discussion.

The site have many qualities with its closeness to nature. East of the site there is a nature reserve and our ambition has been to keep these qualities and make this area to meaningful destination, not only or the patients but also for the general public.





SECTION CURRENT SITE 1:2000













SITE PHOTOGRAPHS

Site Analysis

The six diagrams to the right show how we appoched the site in different steps.

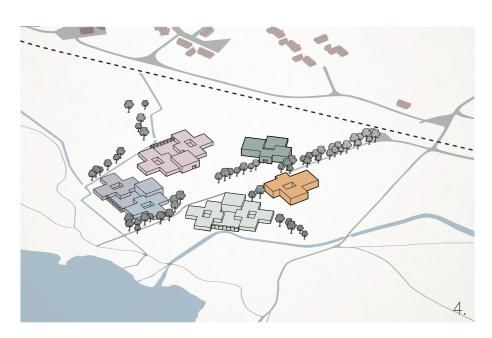
- 1. The bigger part of our site was an open field surrounded by forest and water.
- 2. Arriving to the site the existing roads, apart fro the train track and the walking path, an alley and a smaller path which diagonally cut through our site. It was important for us not to create a barrier between the train track and the suburban area in the north with the already existing walking path and the lake in the south. Therefore we decided to keep this path and use it as a link.
- 3. To give the inpatients the best view of the nature we placed these buildings as close to the forest and the lake as possible. The shape of the buildings makes it possible to have a lot of openings and the path cutting through the site could get a lot of nice sightlines.
- 4. In the north towards the train track and away from the water we placed the outpatient department and the children's psychiatry. It is from here you enter the site and the flow of people is bigger since these two buildings only have daycare. This part of the site therefore is more public, and the gradient goes from the public northeast to a private southwest.
- 5. In the core of the site and in sightline from the alley we placed the entrance building which provided the site with two squares. One urban condensed square outside the entrance and one more organic in between the entrance building and the inpatient wards.
- 6. All the buildings are connected with a outdoor wooden deck and therefore it will be easy to find your way.

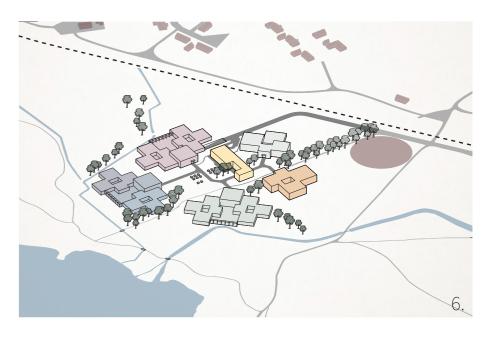


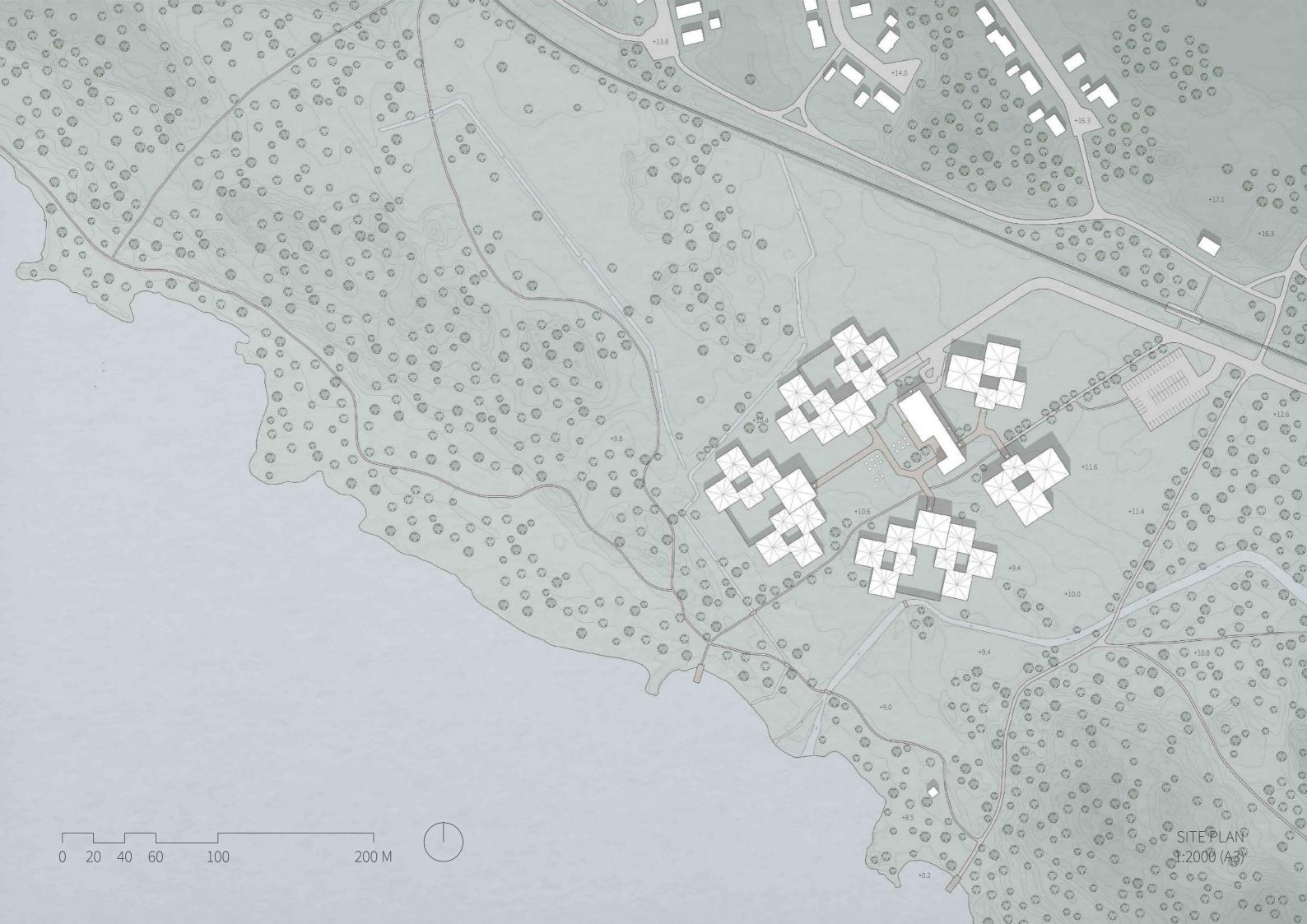










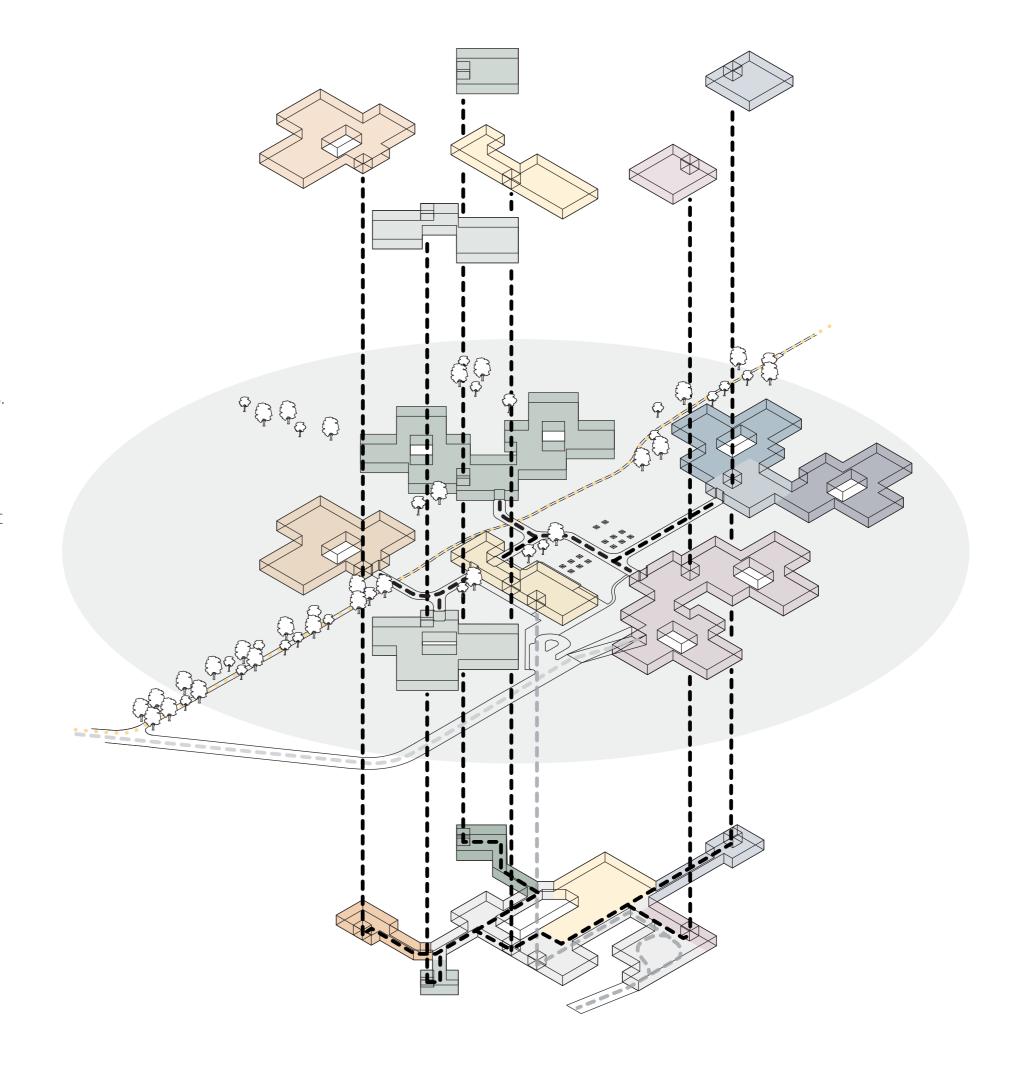


Flows

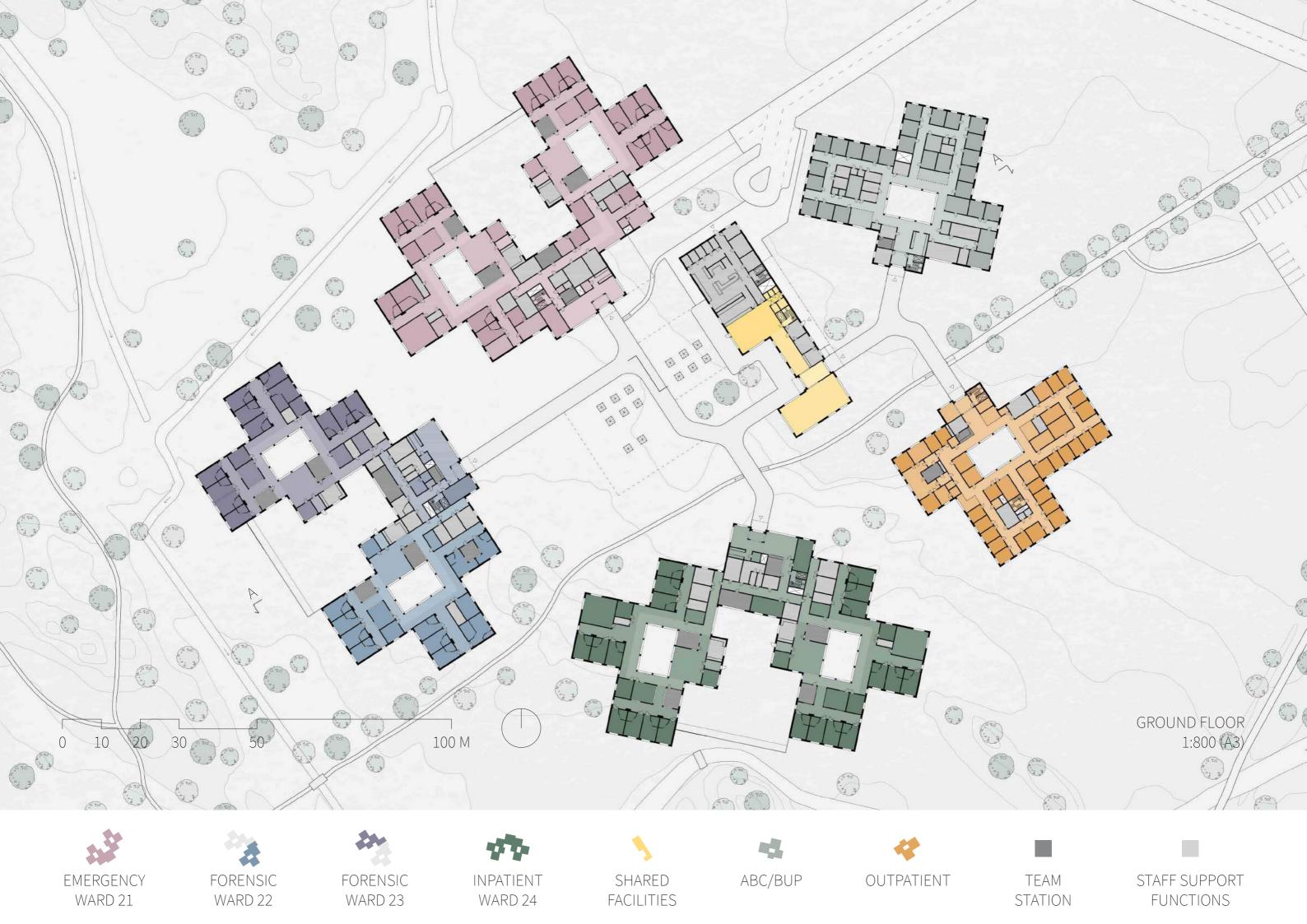
The black crosshatched lines in the diagram to the right describe the flows of the staff within and in between the buildings. To be able to have a broken-up structure on the ground floor the building is connected with a culvert in the basement level. This gives the staff the possibility to use the basement level or the outside wooden deck when they move between the buildings. The culvert system gives also the possibility for the staff in a safe way walk with patients from the ambulance hall to the different wards, for example to the forensic building.

The grey crosshatched lines represent the flows of goods. It arrives to the hospital through the ambulance hall and it thereafter transported to the different departments via the culvert floor.

The yellow dotted line shows how visitors can move right through the hospital site.



STAFF
GOODS
VISITORS





WARD 21



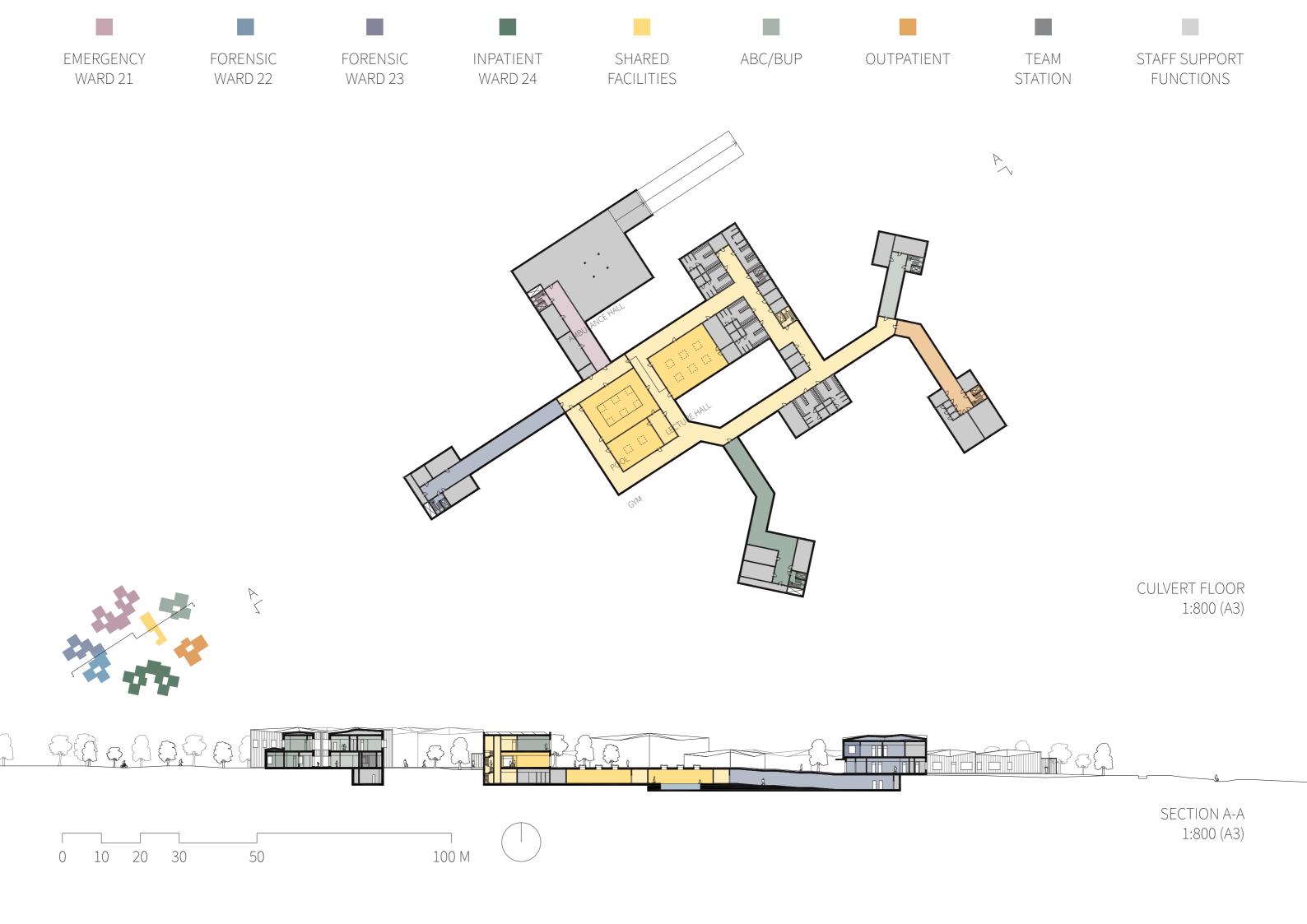
WARD 23

WARD 24

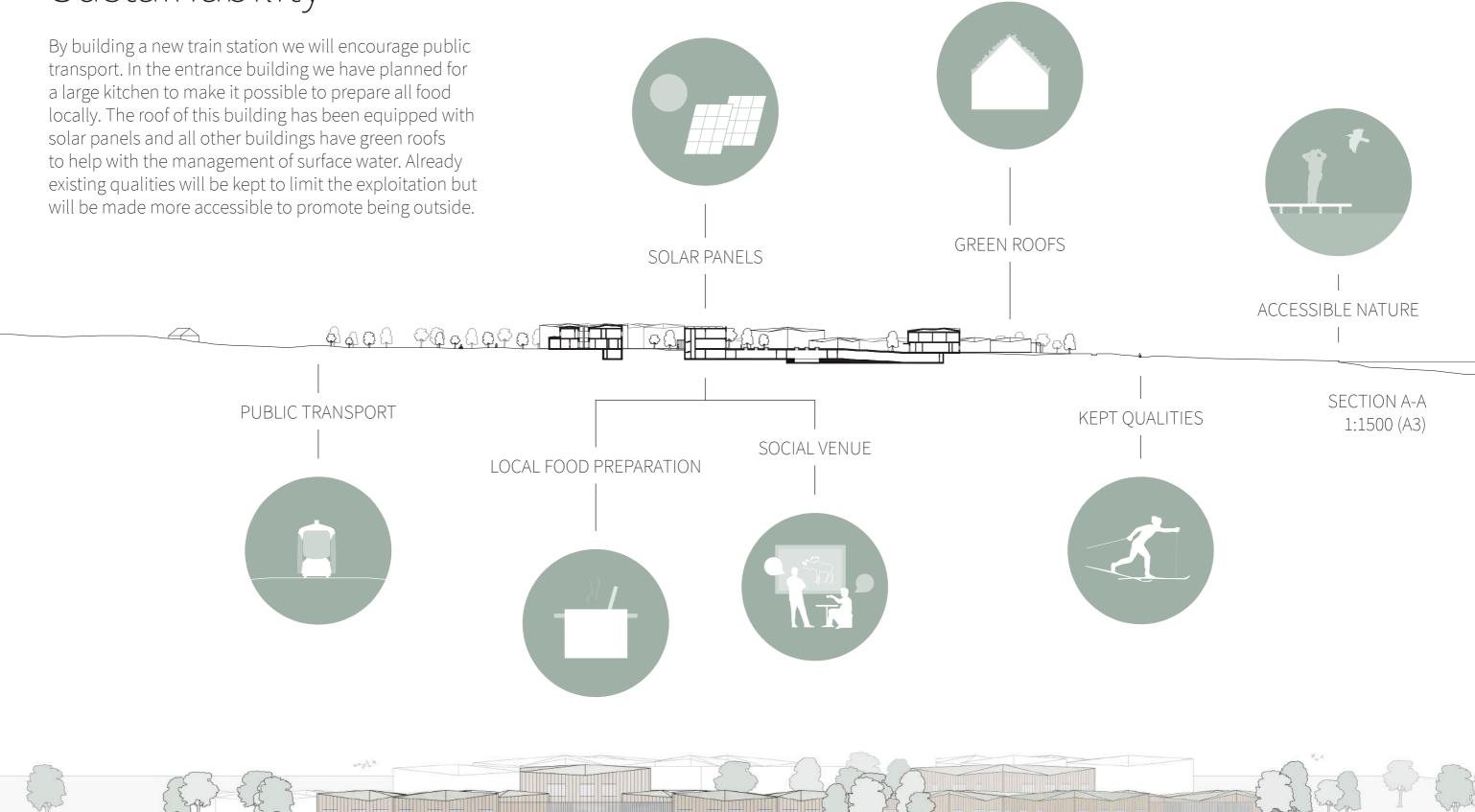
FACILITIES

STATION

FUNCTIONS



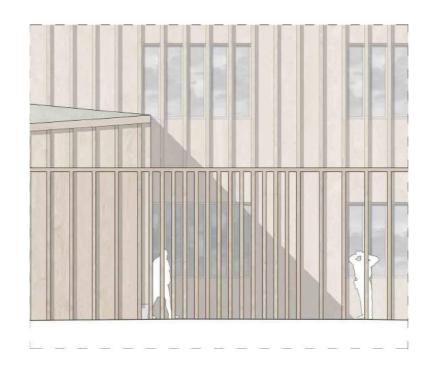
Sustainability



Inpatient ward 24

Since the buildings are quite big in comparison to there height we wanted to create more verticality in the facade. The long and narrow windows placed together in clusters makes the spaces feel sheltered - like a glade. The courtyard enclosement follows the same patterns but opens up more in certain areas.

The roofs consists of a number of triangles that fold up and down and create the feeling of a landscape. The more organic design acts as a contrast to the right angles of the floor plans.



COURTYARD ENCLOSEMENT 1:100 (A3)



ENTRANCE 1:100 (A3)



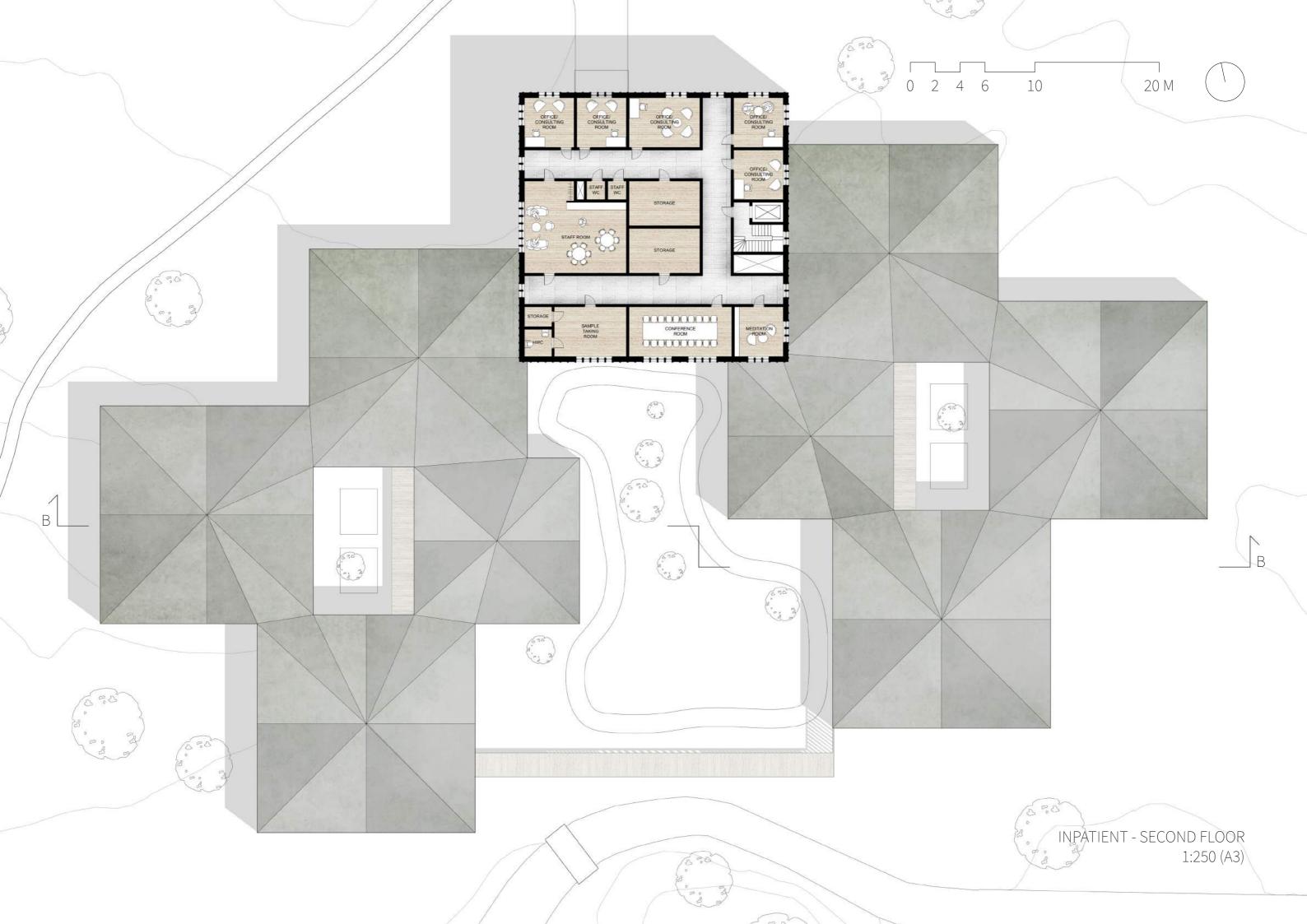
INPATIENT - EAST FACADE 1:250 (A3)



0 2 4 6 10 20 M

INPATIENT - NORTH FACADE 1:250 (A3)





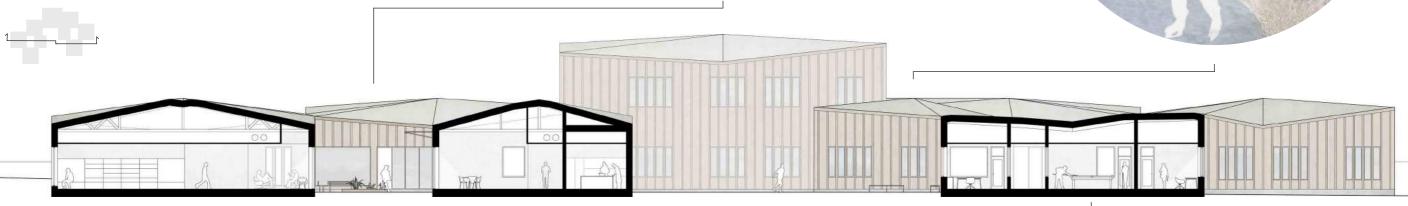


Meaningfulness

According to Antonovsky, meaningfulness has the biggest impact on health in comparison to the other two components in his theory about sense of coherence (manageability and comprehensibility). Meaning is what makes people keep on going even when times are tough. What create meaning is not the same for all patients and therefore we have worked with a variety of different ideas that could content this need.









20 M

10



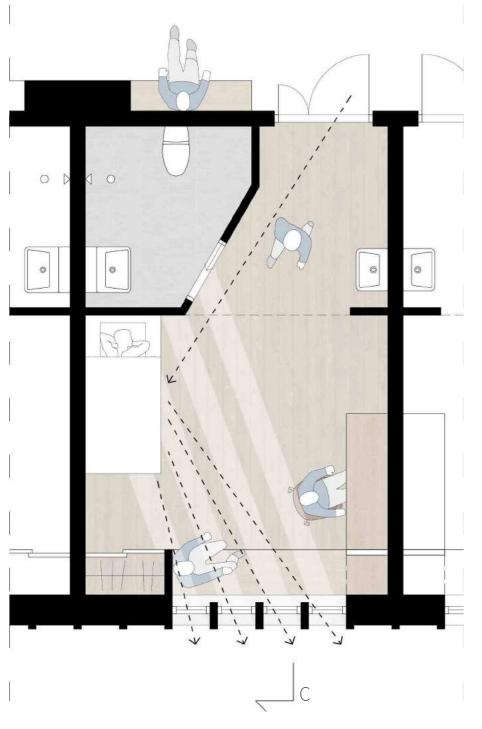


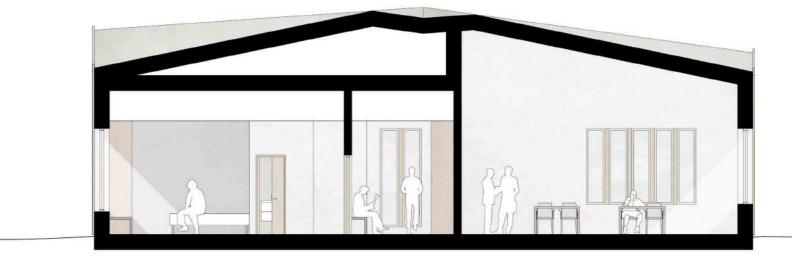
SECTION B-B

1:250 (A3)

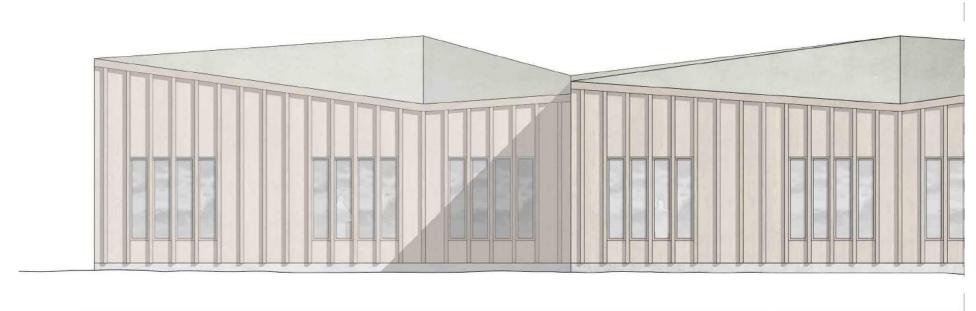
HIGH SOCIAL STIMULI IN ACTIVITY ROOMS





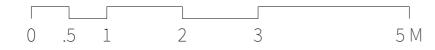


SECTION C-C 1:100 (A3)



CUT-OUT FACADE 1:100 (A3)

WARD ROOM 1:50 (A3)





Researched Informed Design

GRADIENT

The plan of the ward gives the patient the possibility to be in large social contexts (for example in the courtyards). The in between spaces (for example the dayrooms and inner courtyards) make the patients able to use to be a part of the social context happening in the courtyards without full involvement. It can also be a place where a smaller group of people plays boardgames.

Moving away from the squares towards the wardrooms the patient will find shelves with build in benches facing the courtyards and the surrounding nature. For the users this can be more of a hide away where they can be more distanced from the others but easily move towards the bigger social context.

SIGHTLINES

The building offers every wardroom a view of nature. Teamstations and consultation rooms are all placed in facade and the corridors have long sightlines.

There are very few dark centers in the building since it has courtyards in the middle. This gives the staff light into their teamstations and a safe outdoor environment for the patient.

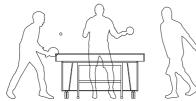
WAYFINDING

The main entrance building has a different shape than the rest of the buildings to make it easier for the patients to find their way. From there the patient is led on a wooden deck to his/her entrance (see arrows below).

Continuing into one ward the building uses the same system in every inpatient plan. They all have a public entrance building, a public square in the middle, private rooms out along the wings and semi-public parts in between (see gradient in the lower left corner).

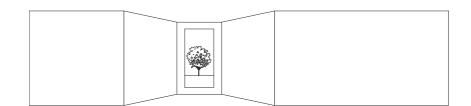


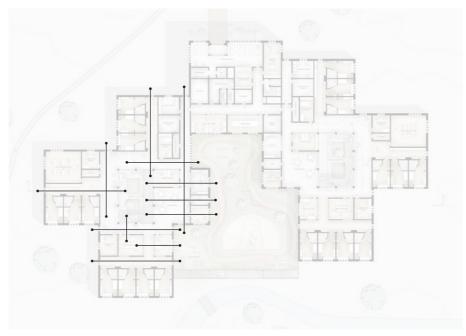






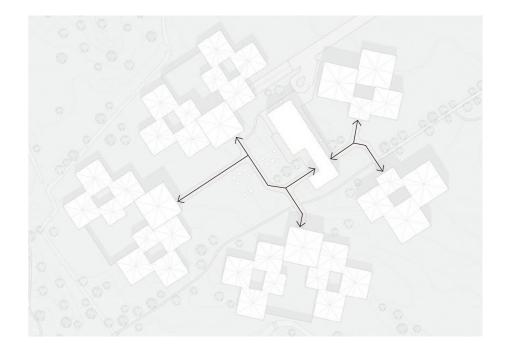












THEME 2

Psychiatric Unit

The six diagrams below to the right shows our main ideas to the plan of the inpatient ward.

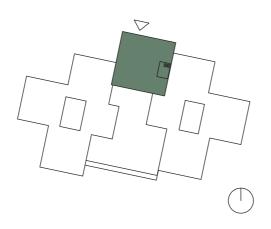
- 1. The entrance square is a neutral zone since it belongs equally much to the two wings. Some of the functions you find here are waitingrooms, visitors room and lots of staff areas.
- 2. From the entrance the spaces gradually become more and more private the further in the building you get.
- 3. From the ward rooms, which are the most private spaces, there are nice views towards the nature outside.
- 4. From the five teamstations the staff has good overview. These cover all public spaces where patients are able to move by themselves.
- 5. Even in the core of the buildings there there is a close connection to nature because of the inner courtyards.
- 6. On the large courtyard the nature acts as the fourth wall.



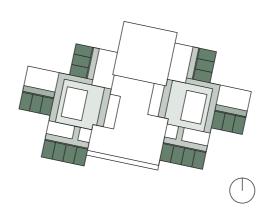
INPATIENT WARD - GROUND FLOOR



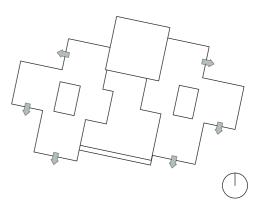
INPATIENT WARD - SECOND FLOOR



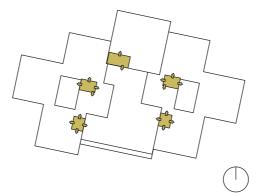
NEUTRAL ENTRANCE



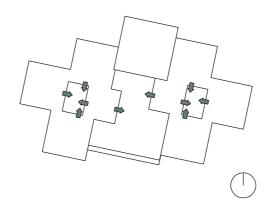
GRADIENT BETWEEN PUBLIC AND PRIVATE



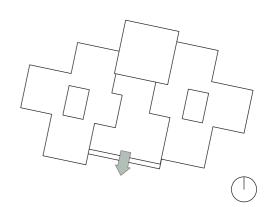
VIEWS TOWARDS NATURE FROM WARD ROOMS



OVERVIEW FROM TEAMSTATIONS



CLOSENESS TO NATURE



NATURE AS ENCLOSEMENT FROM COURTYARD

THEME 3

Health Promotion

In different ways the design of the buildings encourage the users to move and be physically active. In the bigger courtyards there are running tracks and in the culvert level of the building there is a swimming pool and large gym hall with roof lighting.

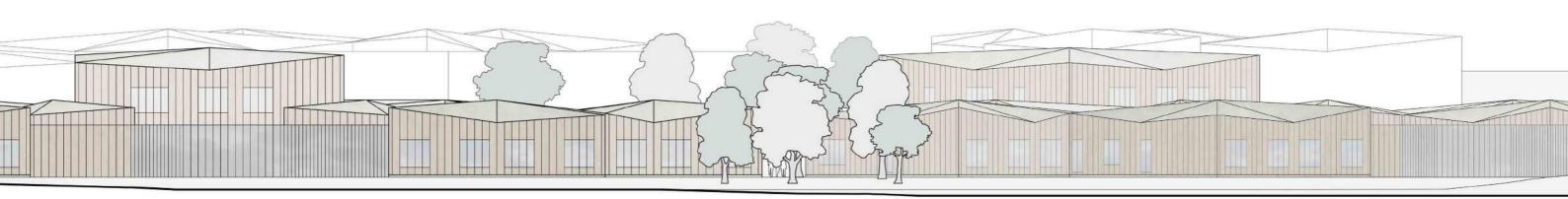
The exhibition hall attracts people to the site and leads them down to the lake and calm resort there along the alley and through the buildings.



SWIMMING POOL IN CULVERT FLOOR



RUNNING TRACK
OUTSIDE

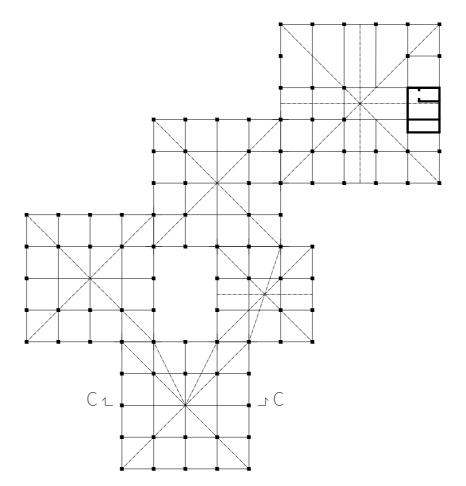


Future Proofing

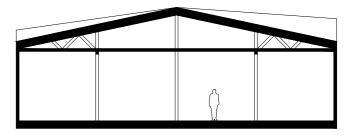
To prepare the building for future changes the construction grid is the same in all structures. The rooms within the buildings are flexible in the way that a wing with wardrooms can become a wing with office spaces.

There is a general plan which is repeated in ward 21, 22, 23 and 24. The different wards will therefore have the possibility to expand if one ward needs more space while another needs less.

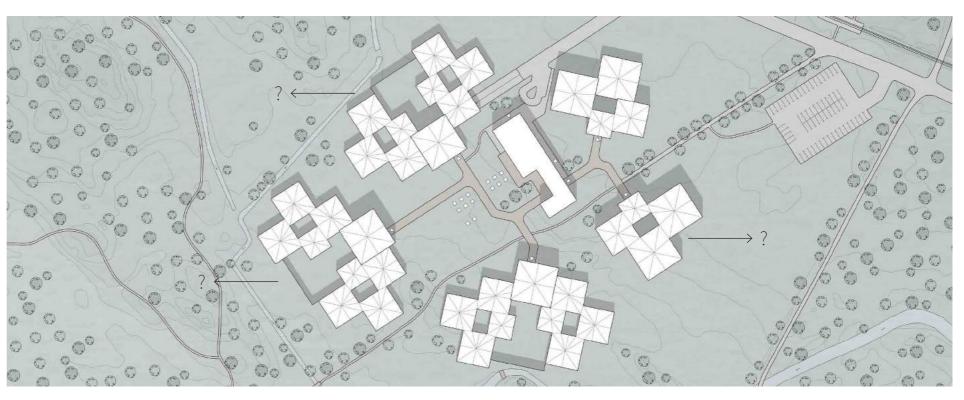
If one building needs to be removed it will barely do any harm on the other functions. The building achieves this flexibility since it is split up in five with the most shared facilities on the culvert level or in the entrance building.



LOAD-BEARING CONSTRUCTION 1:500 (A3)



SECTION C-C 1:200 (A3)





SIGHTLINES BETWEEN BUILDINGS



INPATIENT WEST FACADE



INNER COURTYARD FROM DINING AREA



EXISTING COLONNADE OF TREES



INPATIENT FACADE TOWERS COURTYARD



PLAY OF LIGHT



OUTSIDE WARDROOMS



BIRD VIEW FROM EAST



INPATIENT SOUTH FACADE FROM PATH



INPATIENT WARD IN PLAN VIEW

INITIATION

We visited Västervik to look into two potential sites for a new psychiatry and to meet the county council of Kalmar, our clients. Today the psychiatry is placed on the hospital site but the building is dark with long corridors and would not be described as a healing environment. "Light and green" was some desires from the county concil regarding the new design.

1) The hospital site today 2) The site we chose to work with, which is a more rural site, 2.5 kilometer south from the hospital surrounded by oaks, birches and in connection to the lake Kvännaren.

- 2.1) The chosen site has strong advantages such as
- Healing environment, with its surrounding nature
- Human scale, since the site today is hardly explot in contary to the hospital site which is surrounded by 7 to 8 storey houses.
- Freedom in design

Some of the disadvantages is though

- Existing building on the site that we might need to demolilsh
- Exploit of nature
- -Harder to collaborate with somatic department.

Visiting two psychiatries we were introduced to the needs of these facilileties, three important is overview, homelike and safe environment.

- 3)Brinkåsen forensic psychiatry wall created by the buildingstructures.
- 4)Östra sjukhuset with a generous lightshaft and small clusters of wardrooms.
- 5-8) Sitemodels where we explore the boarders of our choosen site and how different volumes can use the site differently.

Three statements we decided to work futher on with our project.

9)Wayfinding 10)Human scale 11)Bring in nature

VISITING VÄSTERVIK AND THE POTENTIAL SITES







2.1 Our chosen site

STUDYVISITS ON PSYCHIATRIES









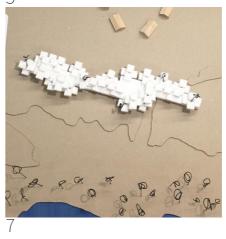
4 Östra sjukhuset

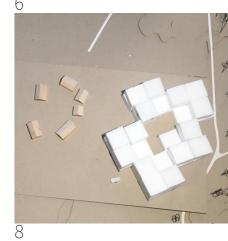
3 Brinkåsen

MODELOUTCOMES FROM WORKSHOPS















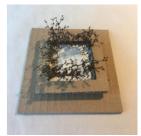












11 Bring in nature

INSPIRATION

The psychiatry in Vejle, build by Arkitema 2017 is one example we have looked at to understand how to work with social density, flexibility and circulation. One example, by adding one floor for staff the building seperates the circulation of the staff from the patients. 1)Vejle psychiatry 2) Veile circulation

3) Atmospheres

Workshop Healthpromotion

We looked into a patients journey from the moment he/she gets sick and visits the psychiatry until he/ she recovers and returnes home. Waitingrooms to feel safe in, meaningful activities to the inpatients and well thoughtout workingspaces also for the staff was some things we took with us. 4) Journey 5)Program

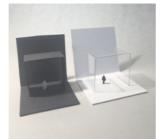
Workshop Psychiatric Unit/Room 6)Ward 7)Levels of Privacy 8

CONCEPT CRITIC

As in Vejle we chose to place the circulation of the staff on second floor. Place the wardrom towards south with common courtyards towards the river and use a general plan for all units. We als wanted one big entrance and use sightlines in corridors for easy wayfinding. Draft plan9)Concept view

LOOKING AT REFERENCES

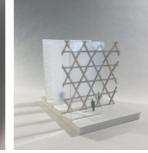


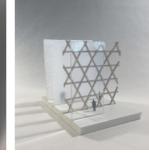












3 Atmosphere

SKETCHING ON DIFFERENT SCALES







6 Ward

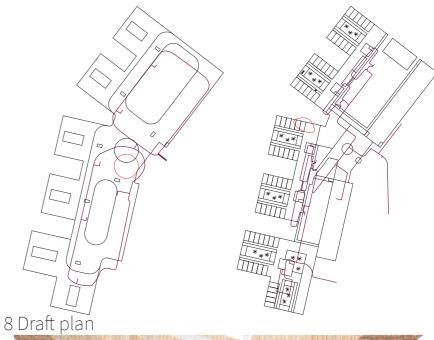






4Journey

FIRST DRAFT, CONCEPT CRITIC



9 Concept view

INNOVATION

One important vision for our project that we developed in the inspiration phase says "To create a sense of coherence for those who are ready to recieve it".

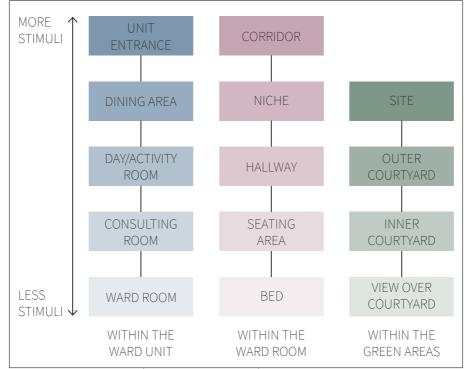
Giving our ward private and public qualities and to offer meaningful activities to happen there are two focus points.

- 1)Functions in relation to stimuli
- 2) Meaningful activities

The Glade is an inspiration we are using and we have looked at how a cluster of threes ofers both intovert and-private areas, those close to the threes, and extrovert and public areas, the open square.

- 3)A place offering both private and public spots
- 4)From one part to five
- 5)Gods, ambulance
- 6)Staff
- 7)Public
- 8)Gradient in plan

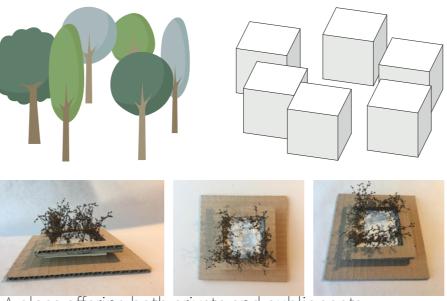
REFLECTING ON OUR VISIONS



1 Functions in relation to stimuli



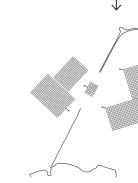
DEVELOPING KONCEPT BY LOOKING AT NATURE



3 A place offering both private and public spots

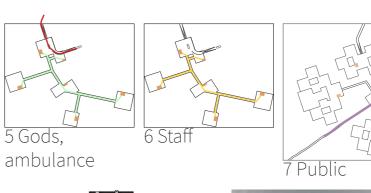
CHANGING STRUCTURE TO FIT OUR CONCEPT



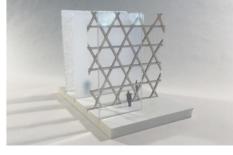


4 From one part to five

FLOWS







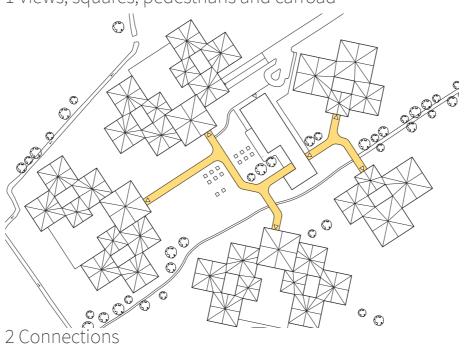
IMPLEMENTATION

- 1) Views, squares, pedestrians and carroad
- 2) Connections
- 3)Levels of privacy
- 4)Wardroom from bed
- 5)Ward 24, inner courtyard
- 6)Wardroom viewing nature and providing bench in corridor
- 7)Flexibility in thepillarsystem
- 8) Solarpanels on entrancebuilding
- 9)Greenroof on wardbuildigs

FINAL PLACEMENT ON SITE



1 Views, squares, pedestrians and carroad

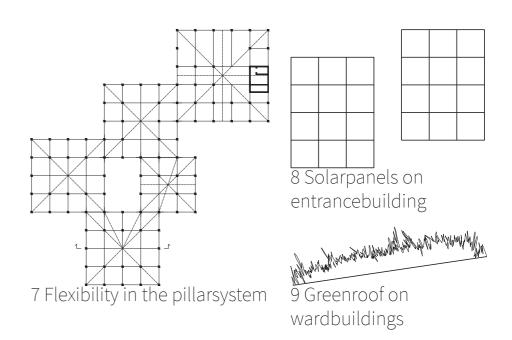


ATMOSPHERES

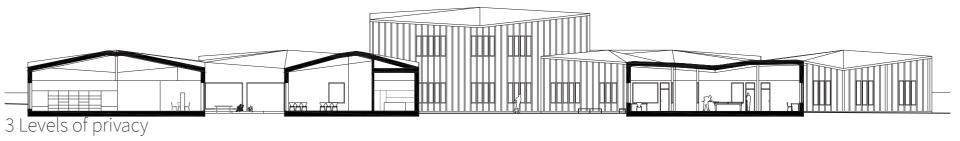


6 Wardroom viewing nature and providing bench in corridor

ROOF



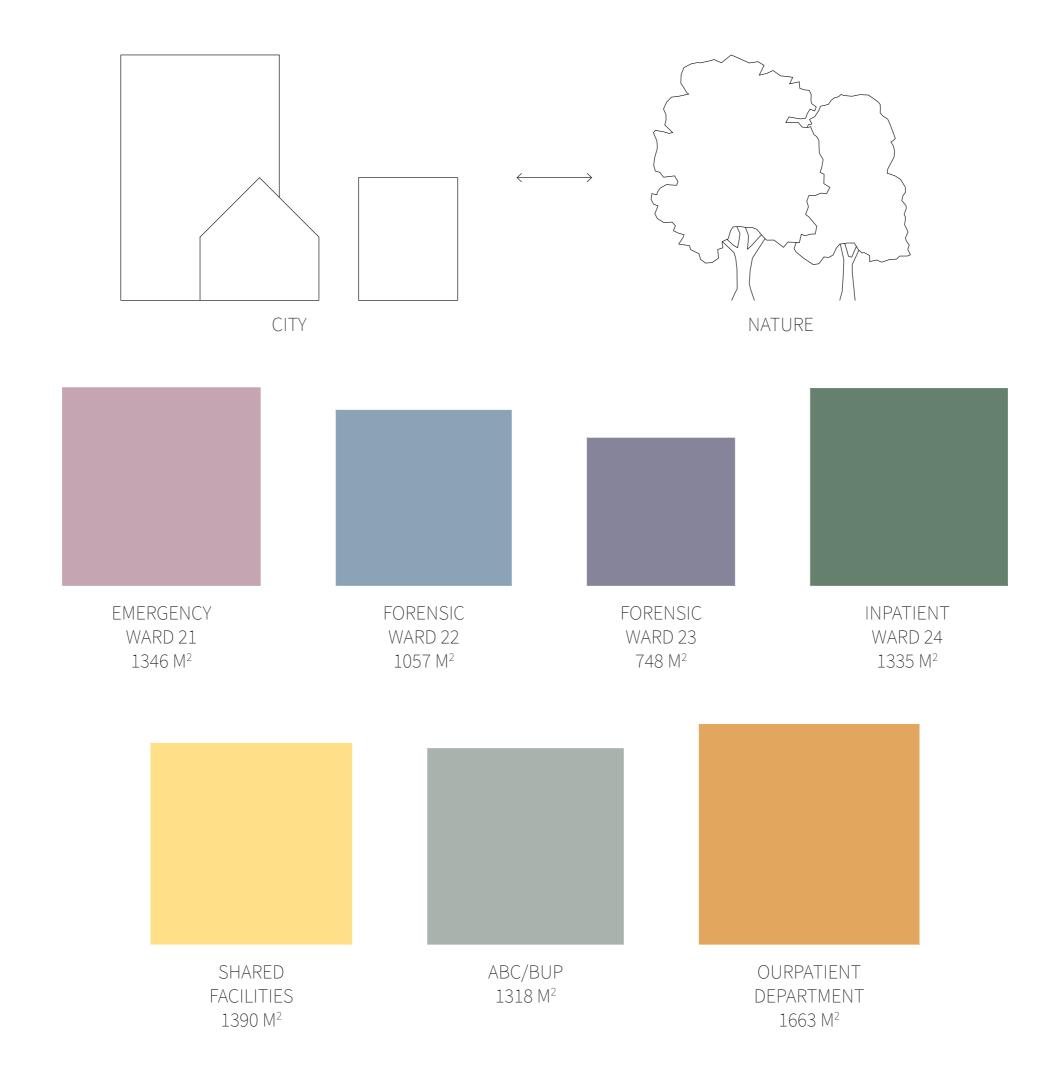
INVESTIGATING PUBLIC AREAS IN WARD 21



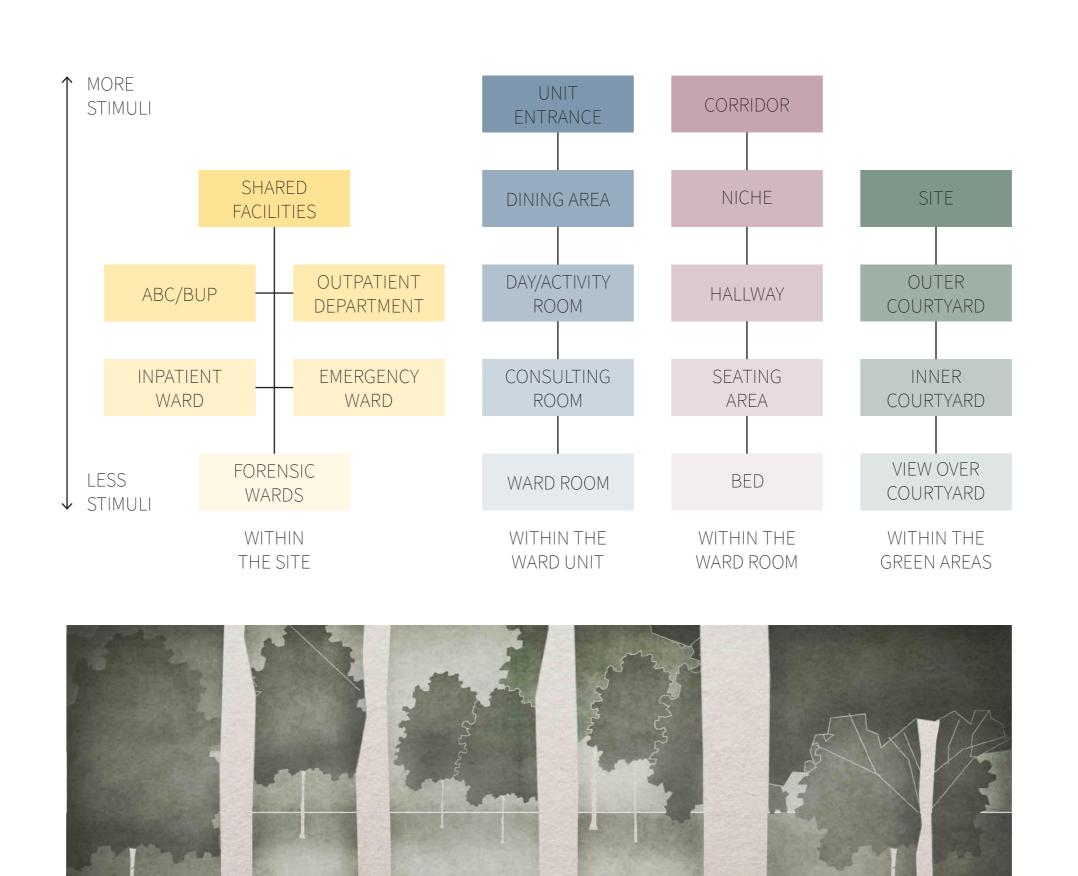


THE GLADE

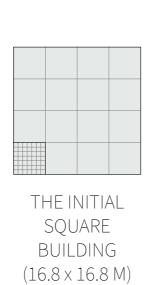
HEALTHCARE ARCHITECTURE - FUTURE VISIONS FOR HEALTHCARE, HOUSING & WORK - 2019.01.14
TEAM 11 - CLARA HALLBERG, FRIDA FORKMAN & OLIVIA OLSSON
EXAMINER: PETER FRÖST - TEACHING TEAM: CHRISTINE HAMMARLING, ELKE MIEDEMA, LIN TAN & SAGA KARLSSON



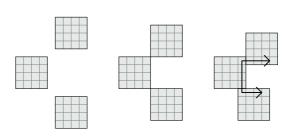




A GLADE = EN GLÄNTA ATT GLÄNTA = TO OPEN SLIGHTLY

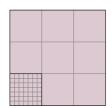




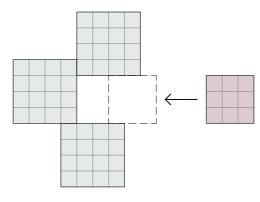


WARD ROOMS AND CONSULTING ROOMS

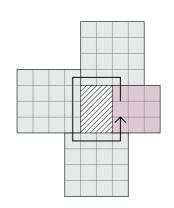
A TRIO OF SQUARES CREATING A CLUSTER



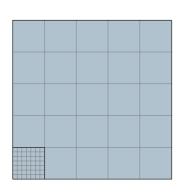
SMALLER BUILDING FOR PUCLIC FUNCTIONS (12.6 x 12.6)



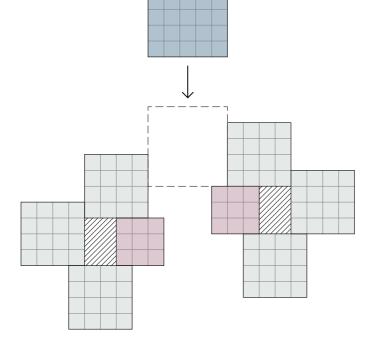
CLOSING THE CIRCLE



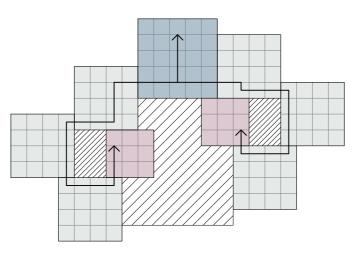
THE BUILDING ITSELF FORMING AN INNER COURTYARD



LARGER ENTRANCE BUILDING (21.0 x 21.0)

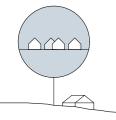


DOCKING AND CONNECTING
TWO WARD CLUSTERS



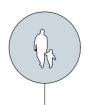
INDOOR CONNECTIONS AND A SHARED OUTDOOR YARD



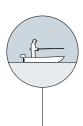












SECTION CURRENT SITE 1:2000









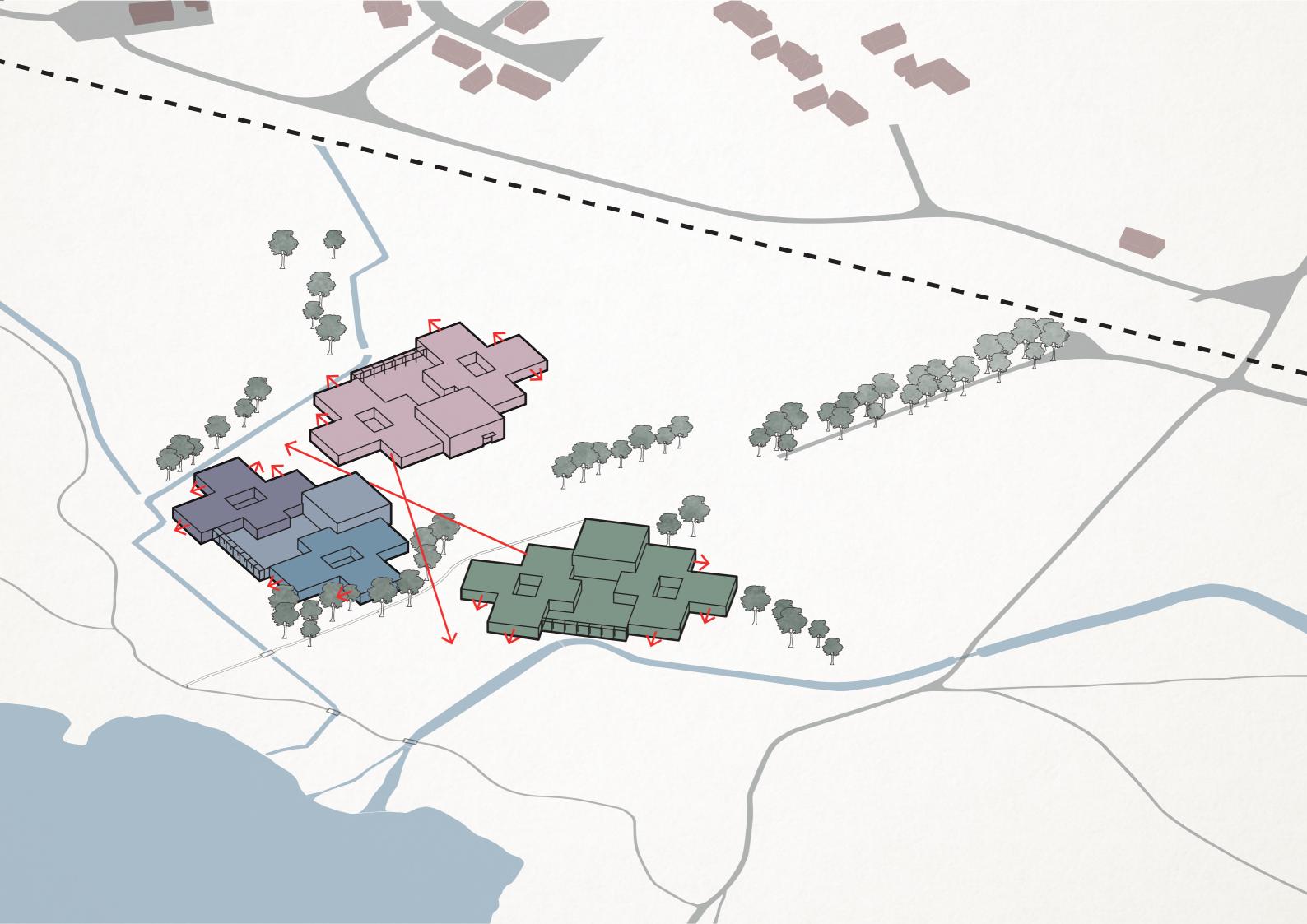


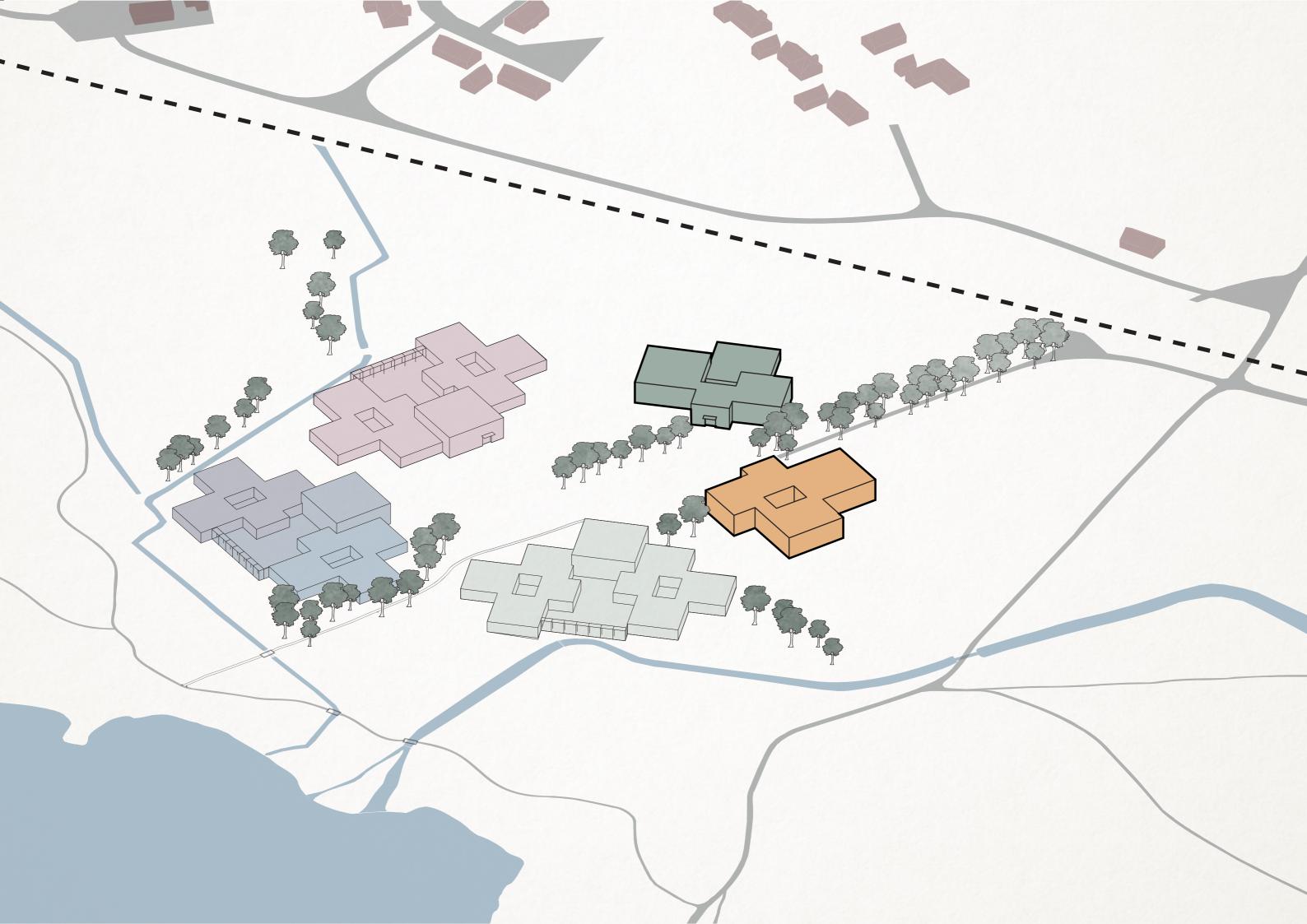


SITE PHOTOGRAPHS



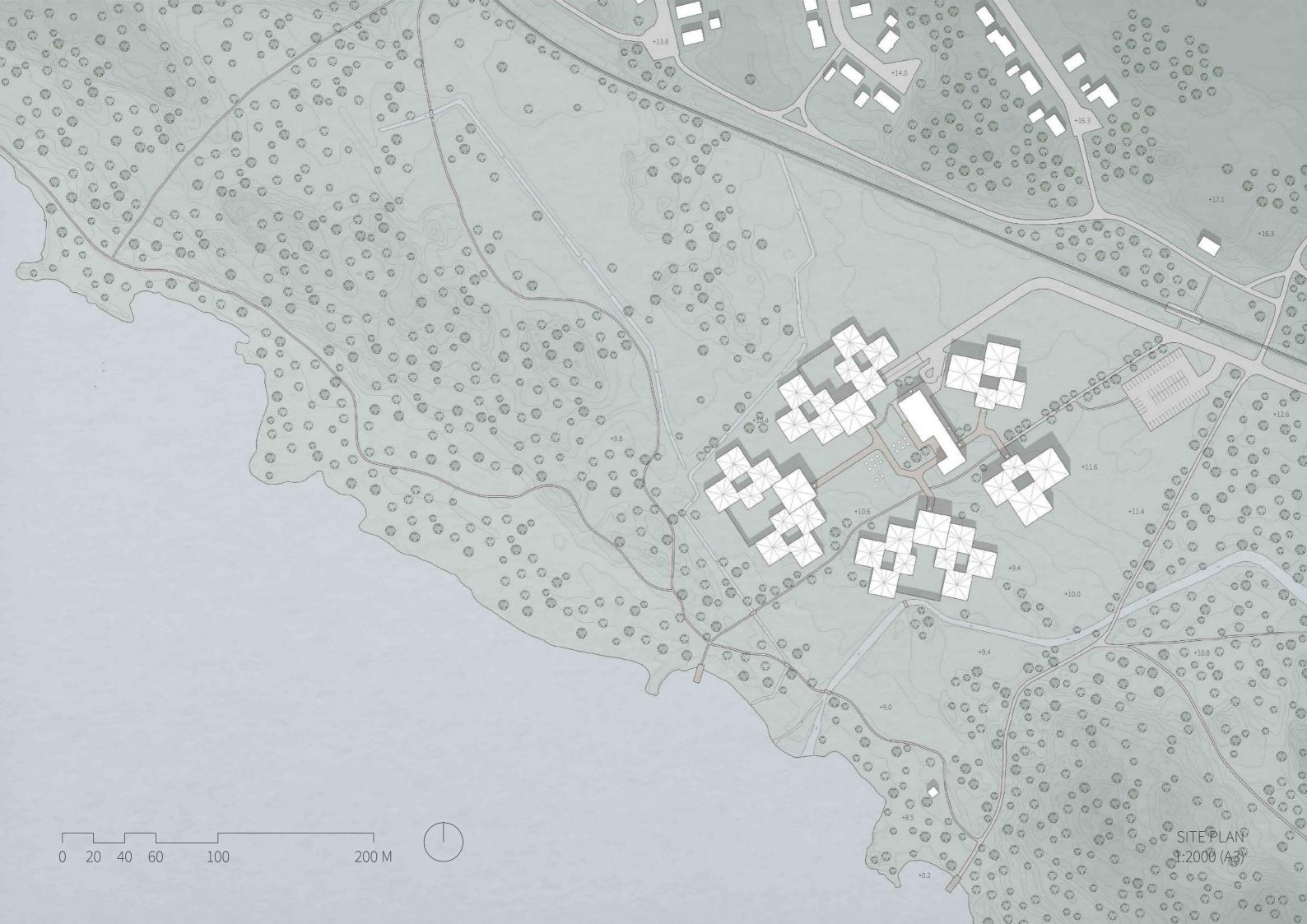


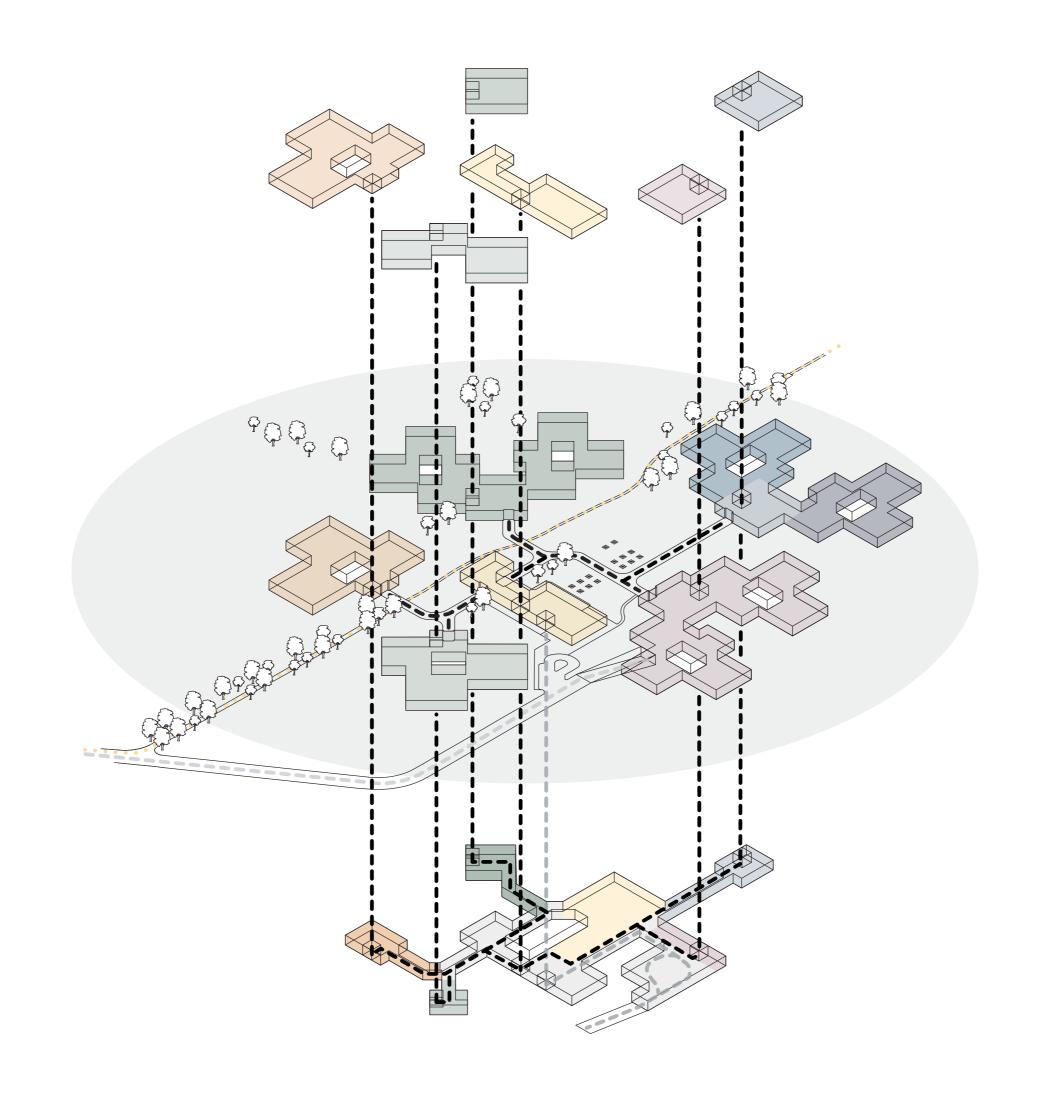


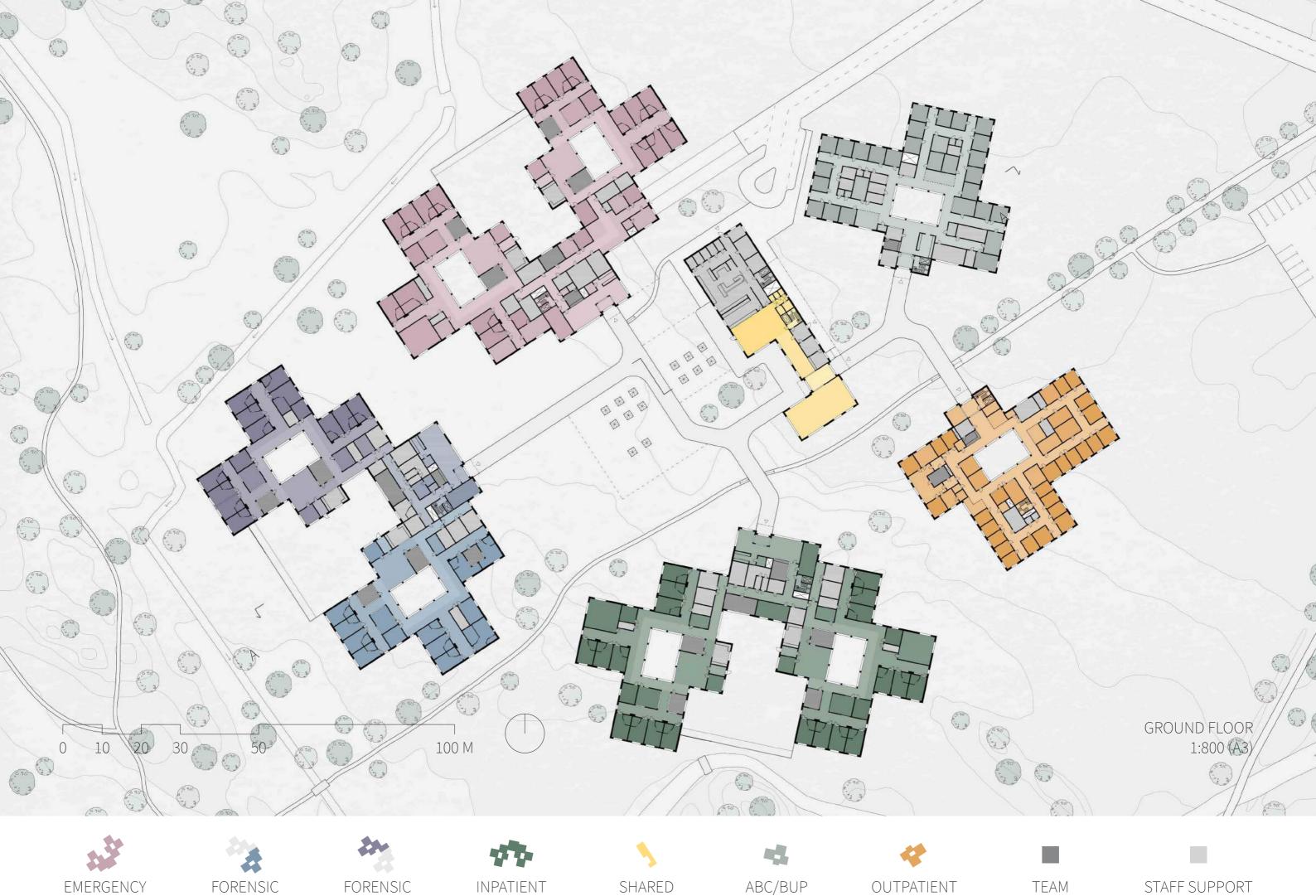












EMERGENCY WARD 21

FORENSIC WARD 22

WARD 23

WARD 24

FACILITIES

TEAM STATION

FUNCTIONS



WARD 21



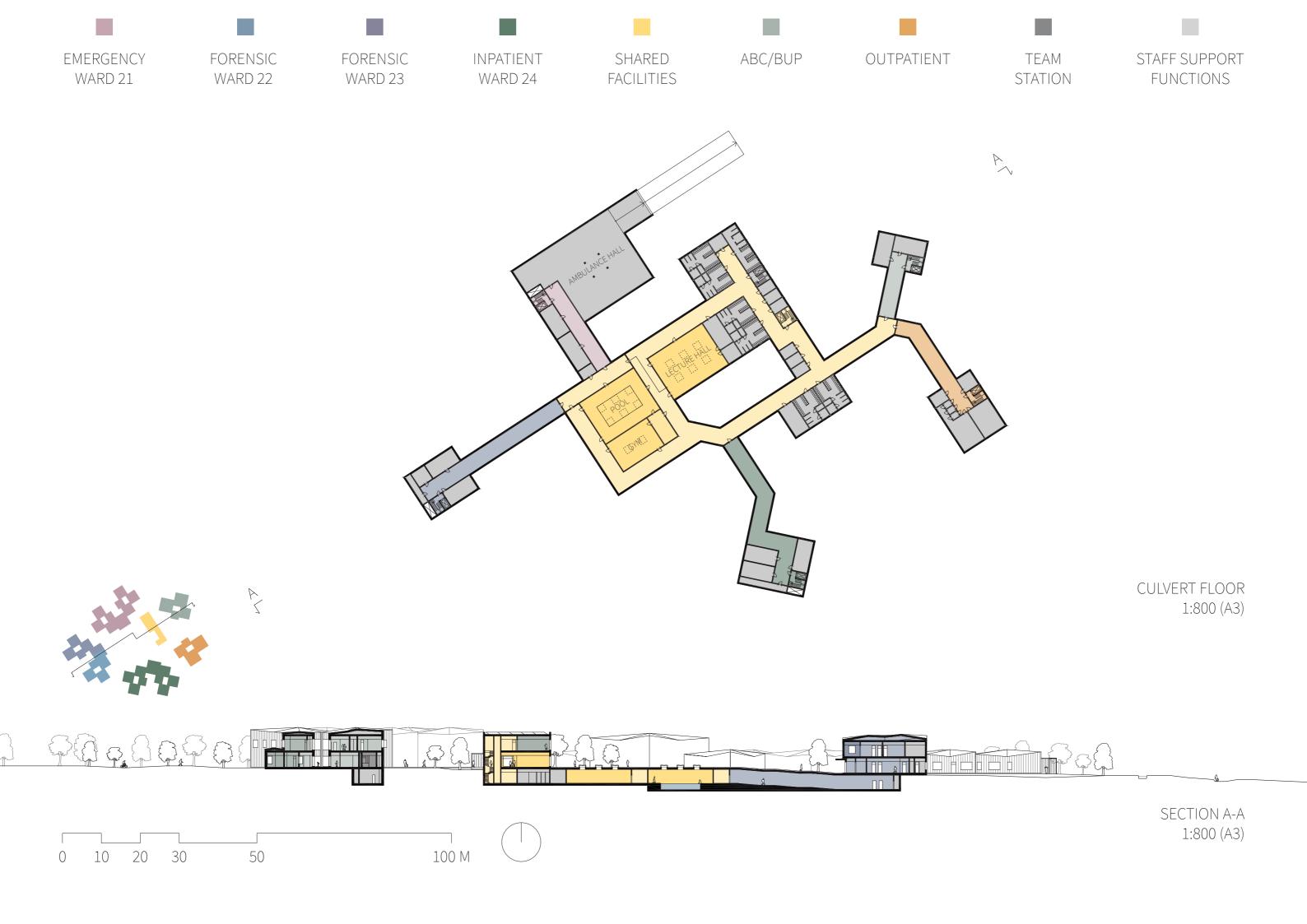


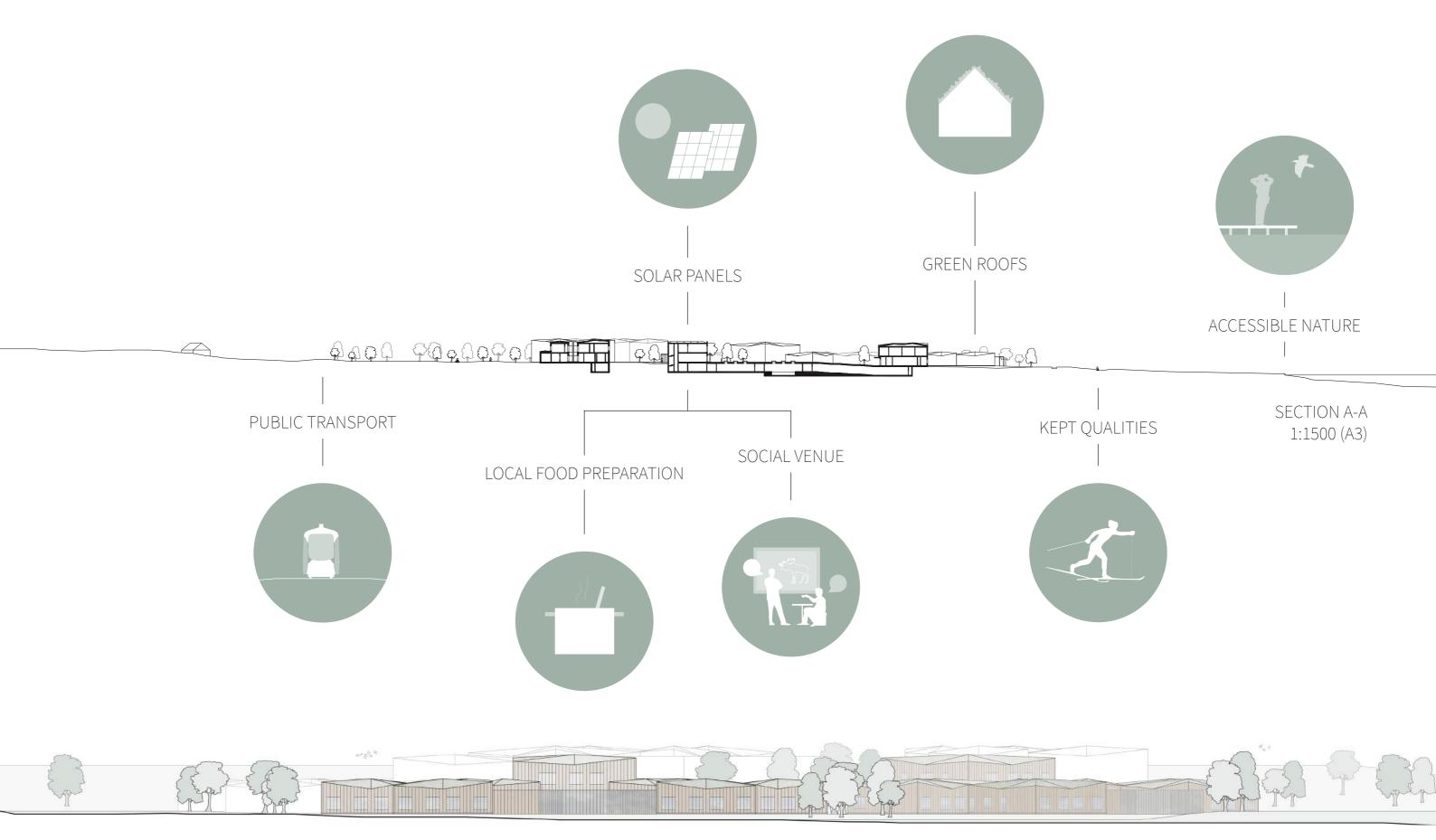
WARD 24

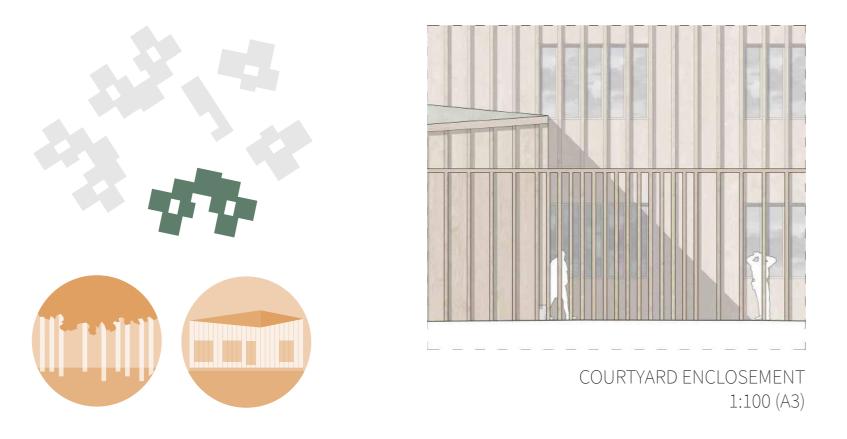




FUNCTIONS







0 2 4 6

10

20 M



ENTRANCE 1:100 (A3)

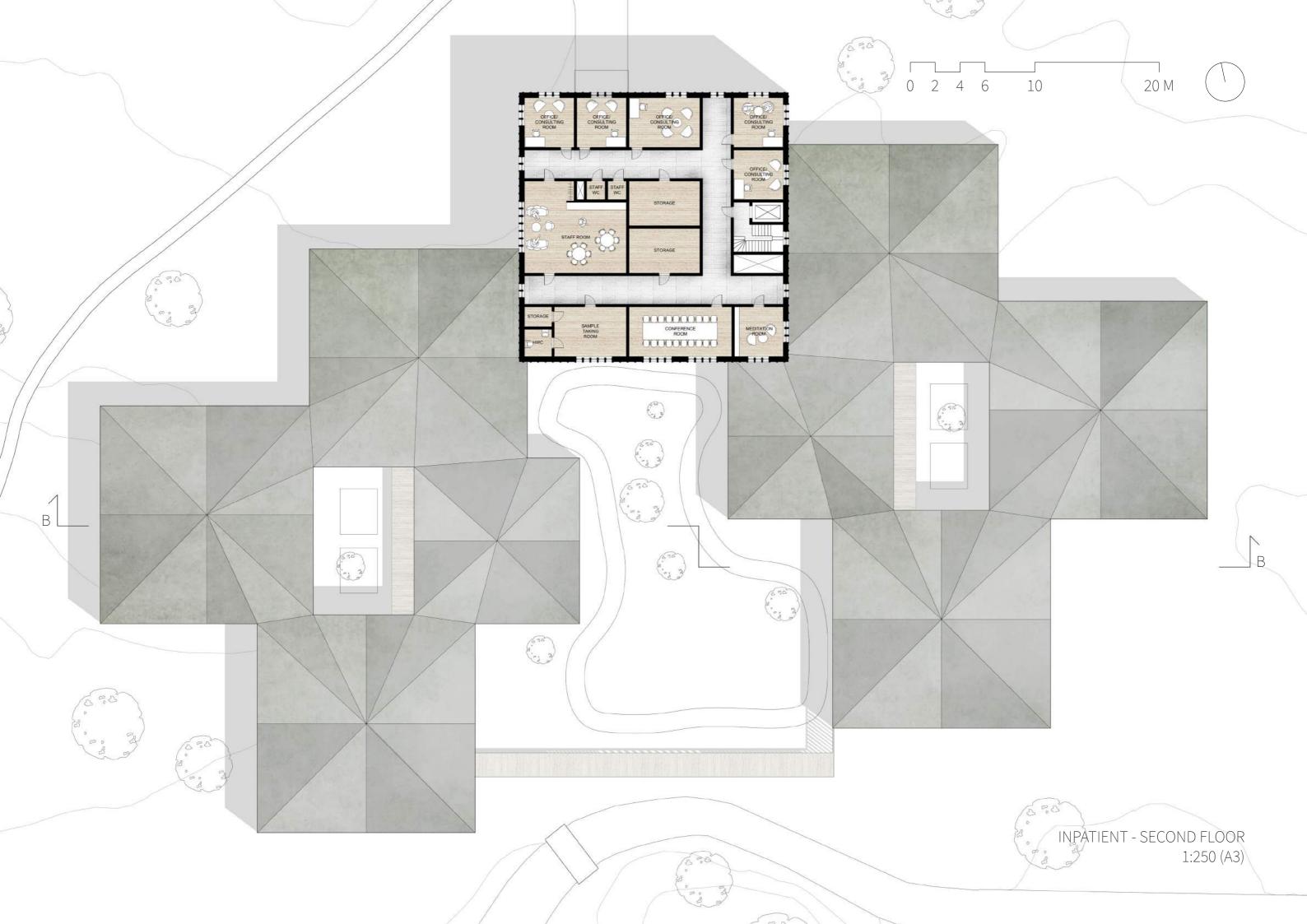


INPATIENT - EAST FACADE 1:250 (A3)

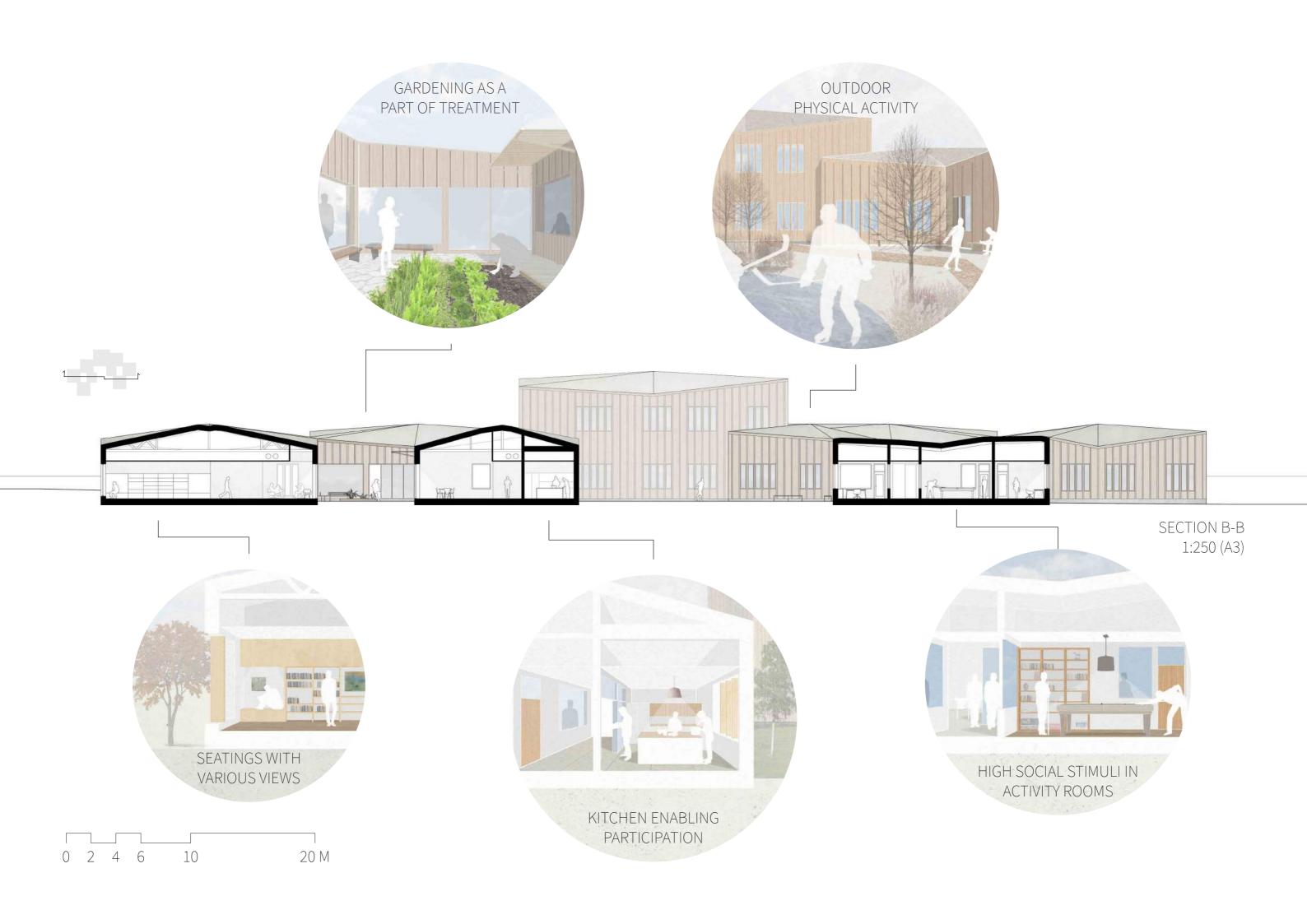


INPATIENT - NORTH FACADE 1:250 (A3)

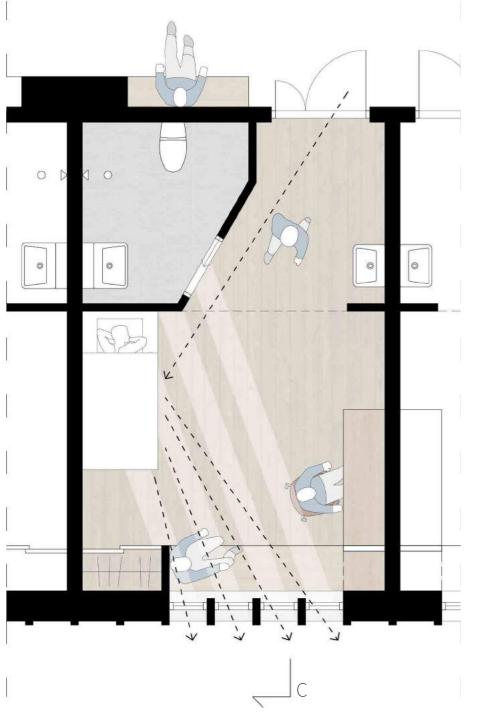


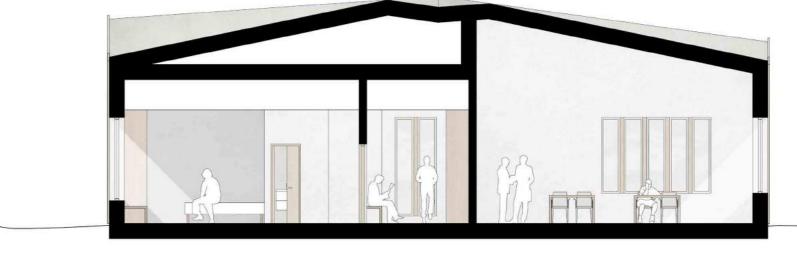




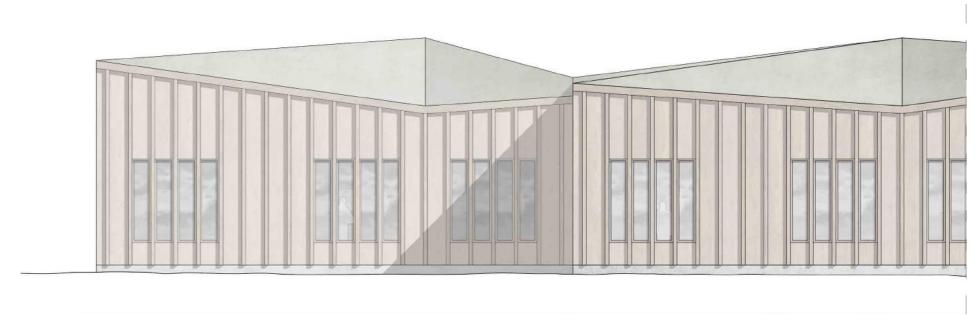








SECTION C-C 1:100 (A3)



CUT-OUT FACADE 1:100 (A3)

WARD ROOM 1:50 (A3)







SIGHTLINES BETWEEN BUILDINGS



INPATIENT WEST FACADE



INNER COURTYARD FROM DINING AREA



EXISTING COLONNADE OF TREES



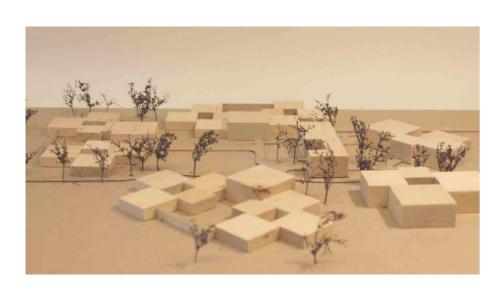
INPATIENT FACADE TOWERS COURTYARD



PLAY OF LIGHT



OUTSIDE WARDROOMS



BIRD VIEW FROM EAST



INPATIENT SOUTH FACADE FROM PATH



INPATIENT WARD IN PLAN VIEW



SIGHTLINES BETWEEN BUILDINGS



INPATIENT WEST FACADE



INNER COURTYARD FROM DINING AREA



EXISTING COLONNADE OF TREES

THANK



BIRD VIEW FROM EAST



INPATIENT SOUTH FACADE FROM PATH



PLAY OF LIGHT



OUTSIDE WARDROOMS



INPATIENT WARD IN PLAN VIEW