

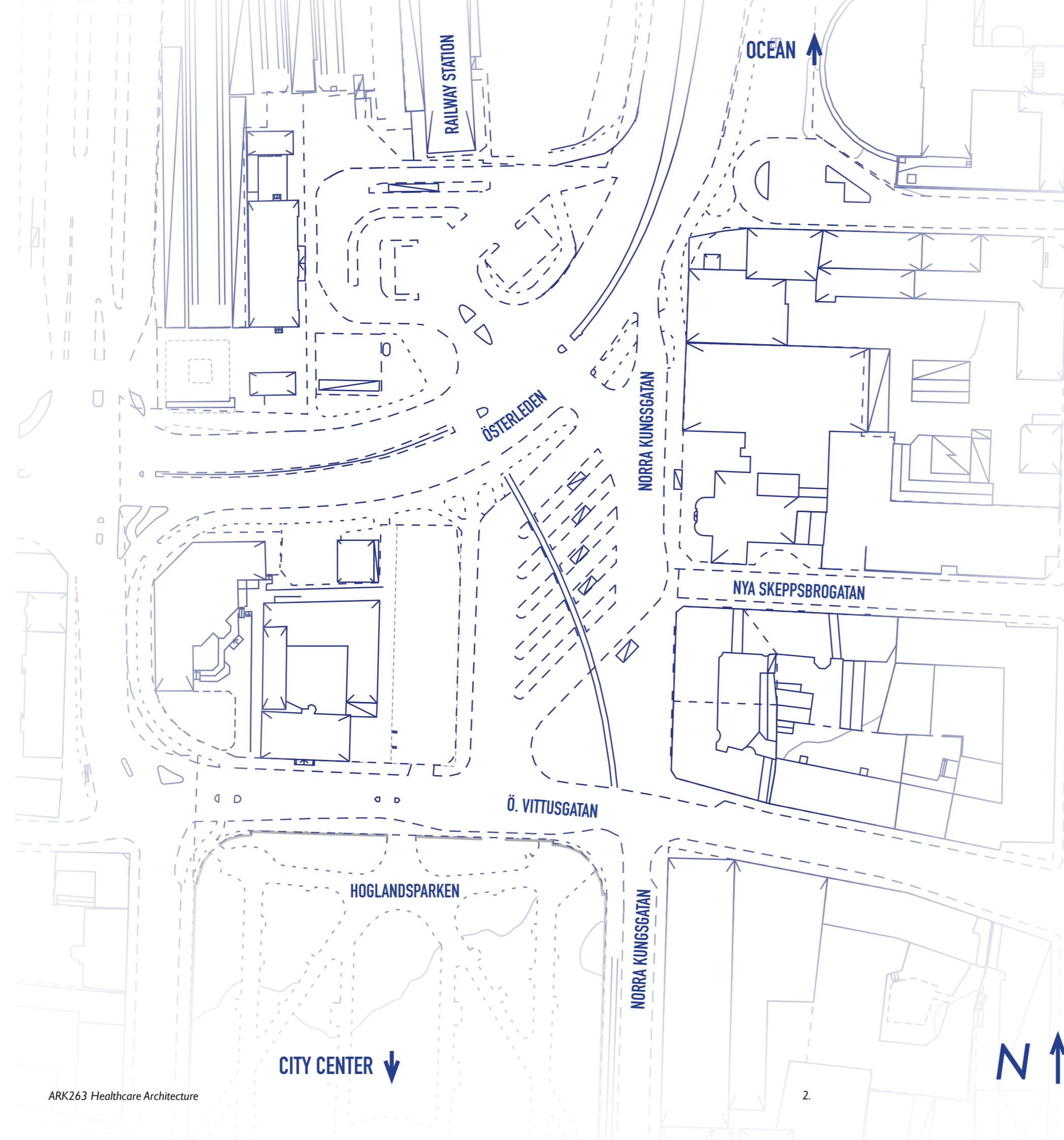


## SHIFTING LIGHTS

A HEALING AND INVITING ADDITION TO THE CITY

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## INTRODUCTION

In the autumn of 2020 we have worked with the assignment to design a new healthcare center in Karlskrona.

The city of Karlskrona is located in the southeastern parts of Sweden, in Blekinge archipelago, spread over 30 islands connected with bridges. Karlskrona has a long history and is famous for its baroque city plan, which is a part of the UNESCO world heritage list.

The site for the project is located in Kungsplan, which is in the northern part of the main island Trossö. Kungsplan is one of the first things you see entering the city, therefore it is important to create a healthcare center that not only fulfills its purpose of helping and healing people, but also works as an entrance to the city. Today Kungsplan functions as a bus central surrounded by important historical buildings such as Friberg'ska huset (1905-1906) and Public Bath building (1903-1904), both built in art deco style. North of Kungsplan, the railway station of the city is located, in the west you find the wooden houses of Kv. Holmdahl (19th century) and in the south you find the baroque styled Hoglands Park.

The site comes with some challenges. Since it's located close to the sea and also located just 1,6 meters above sea level the flooding risk is high and needs to be highly considered while shaping the new healthcare center. It is also located close to one of the most trafficked roads in Karlskrona which emits noise and gives a risk of explosion. Across Kungsplan extends the railway that provided the old shipyard in the 19th century. Since it tells an important story about Karlskrona's history we find it crucial to keep and to be a part of the design of the building.



Island of Trossö

## DESIGN STRATEGIES

Starting this project, we chose nine design strategies within the categories site, sustainability and brief to integrate in our proposal.

For the strategy **Translation of Heritage**, we want to find inspiration from the surrounding buildings and landscape and translate them to a modern baroque design that we can apply for the building.

For the strategy **Positions**, we have looked at the relation to the surrounding buildings, shaped the new building so it's easy to move around inspired by Friberg'ska huset and the Public Bath house.

The third strategy **Shaping the Landscape** is about working with the landscape so the building is easily accessible and contributes to the building design. Since the building has to be elevated due to the flooding risk, we want to see the landscape design as a part of the building.

The **Weather Proofing** strategy is about making the building adaptable for different weather conditions. Wind shelters will be integrated, such as places to hide from the rain or to find shade and solar shading will be a part of the building design.

The **4,2 x 4,2** strategy is about flexibility. Using a grid system that is 4,2 x 4,2 meters, we can minimize the numbers of bearing walls and make the building easy to adapt for changes of the program in the future. The grid works well for a wooden construction it is preferable for a modern sustainable building in Sweden.

With the **Healing Architecture** strategy, we want to create calm and soothing environments. By working with wooden materials, a light color palette and bringing in green, we want to help the patient feel better about visiting the doctor and have a good stay at the healthcare center. With a sculptural staircase we hope to attract people to walk instead of taking the elevator. With good-placed windows the building is easy-orientated and the day-light levels are good for the working staff.

For the strategy **Height Games**, we want to use the requirement of the elevated building as an advantage instead of a disadvantage. The detail plan tells that public functions can be at a lower level than medical functions. We use this to design the ground floor giving exciting environments.

**Intuitive Movement** is about how the building design helps the wayfinding, by having a central staircase and working with sightlines and framed views.

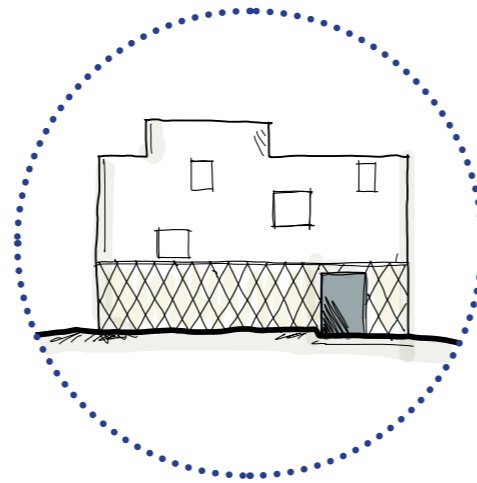
Last and not least, the **Not Your Common** strategy. We want to find innovative ways to shape this healthcare center by not designing for the common waiting hall, a common way for doctors to work and sharing functions between different units.

SITE

SUSTAINABILITY

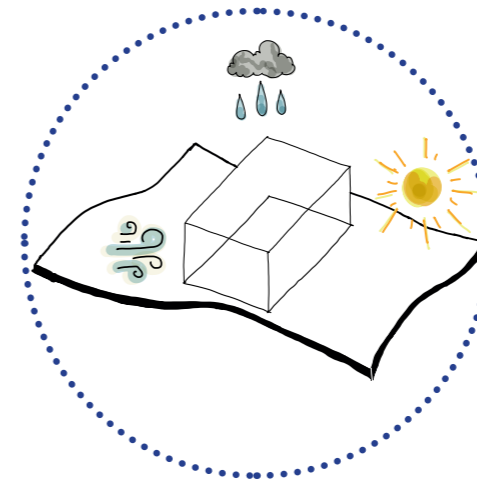
BRIEF

### SITE



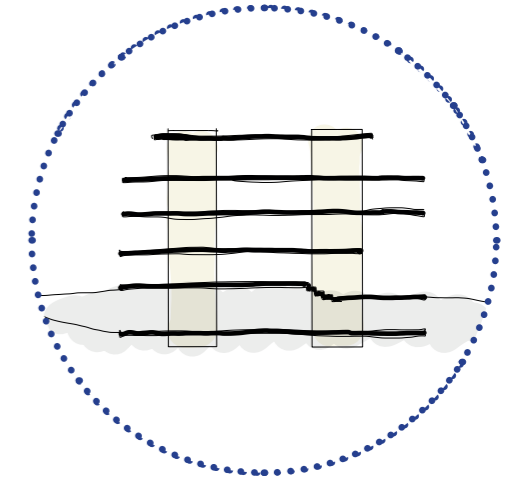
TRANSLATION OF HERITAGE

### SUSTAINABILITY

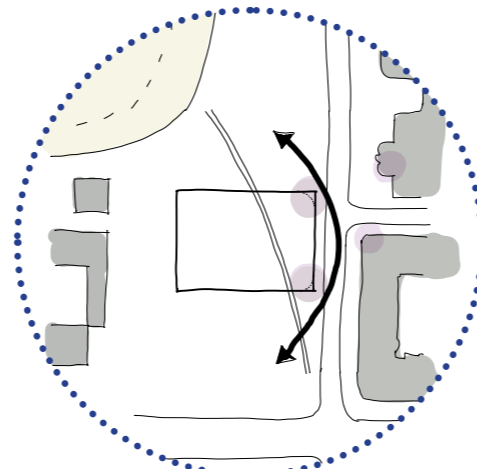


WEATHER PROOFING

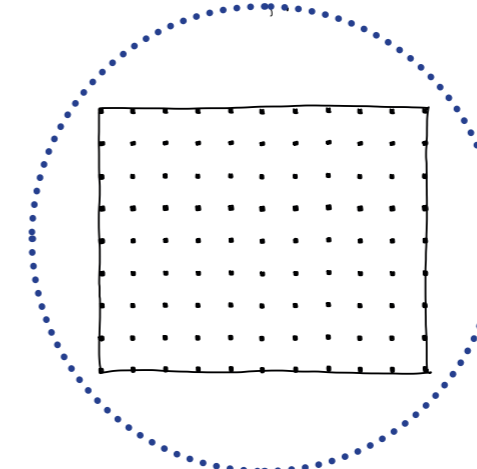
### BRIEF



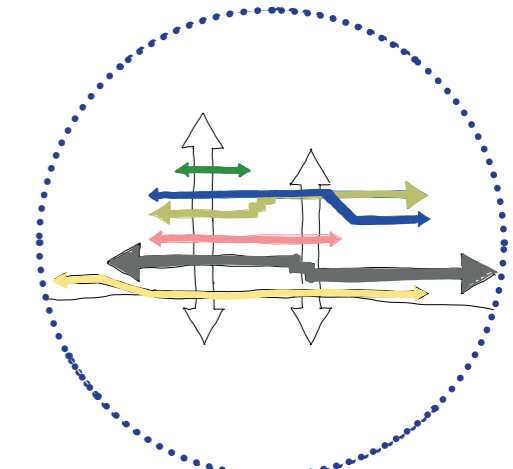
HEIGHT GAMES



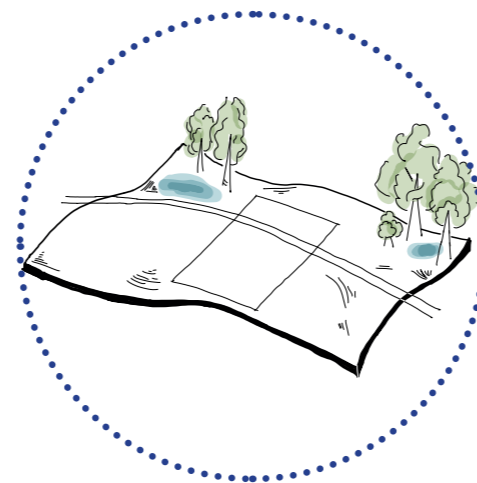
POSITIONS



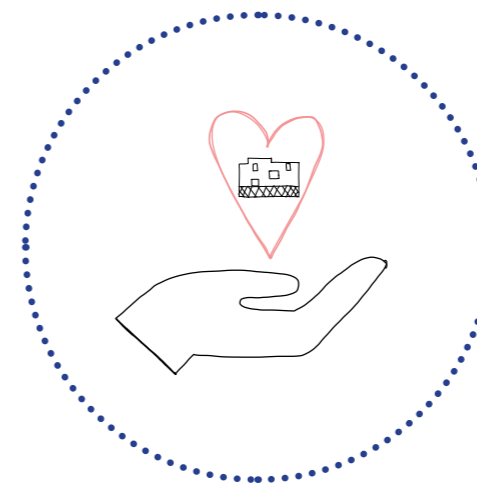
4,2 X 4,2



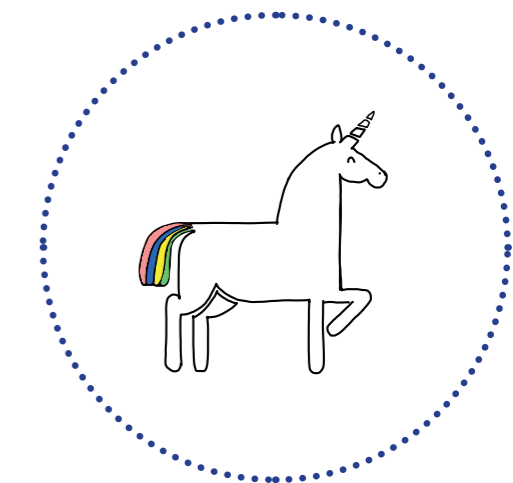
INTUITIVE MOVEMENT



SHAPING LANDSCAPE



HEALING ARCHITECTURE



NOT YOUR COMMON...

## CHALLENGING THE BRIEF

By challenging the given program, with reducing area and merging space and functions this building can make room for more public functions and by that give something back to the citizens of Karlskrona.

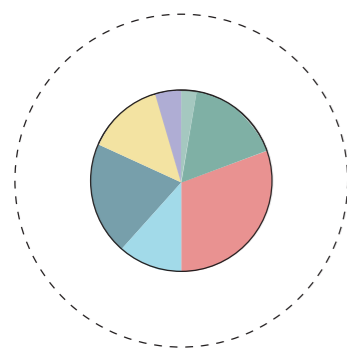
Spaces we believe can be shared over units are waiting rooms, staff space, office space and reception. Even though we merge some areas together, we'll keep the same quality to the areas and they are evenly easy to use. The big waiting room is located on the ground floor, close to a library hub and a café which you can use while waiting for your appointment. By using an interactive system, the patient checks in at the main reception, and a notification tells when it's time to go to meet the doctor in the doctor's pick-up zone at the right unit. To help with wayfinding, a smaller reception is placed at each floor.

During this project, we interviewed a medical student that works at a healthcare center to understand how the doctors are working and how they use their space. We got to know that the doctors have a busy schedule, and

that it therefore is important that they can do paperwork close to where they examine patients. We also learned it's preferable with 'more and smaller rooms' rather than 'fewer and bigger ones'. Due to this, we decided to have office space within each examination room. Together with that we have a common activity-based working space close to the main staff area located on the top floor. The common office area is for all units to use and is mainly dedicated to administrative work.

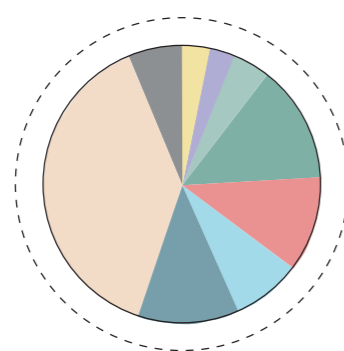
We have also placed the different units strategically together. For example is the medical care unit and women's care unit placed together so if needed they could share sampling functions and examine rooms. Other sharable functions are telephone rooms and conversation rooms. Instead of having several big staff rooms for each floor we have one big one on the top floor and smaller coffee hubs for each unit.

ORIGINAL PROGRAMME  
2600 SQM BTA



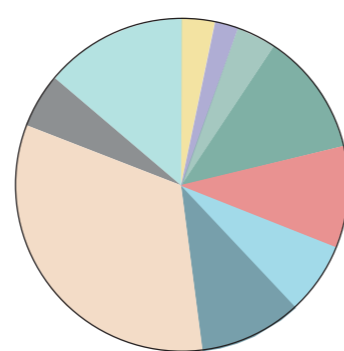
MEDICAL  
WOMEN'S CARE  
REHAB

UPDATED PROGRAMME + TECHNICAL & COMMUNICATION  
4000 SQM BTA

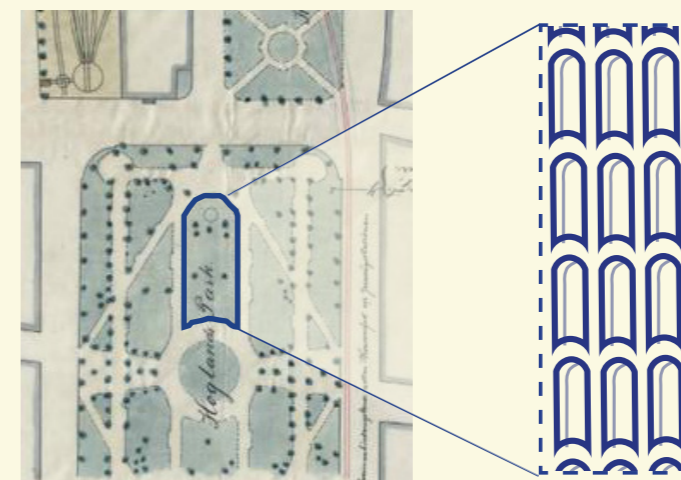
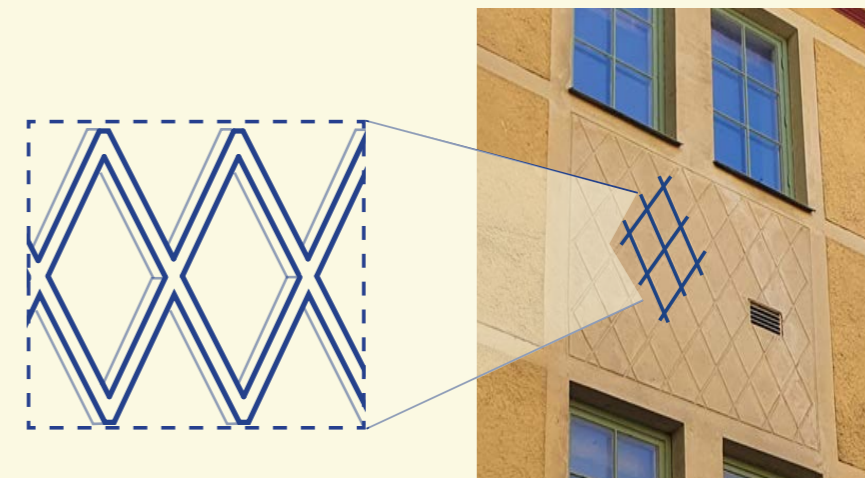


STAFF  
DENTAL  
CHILDREN'S CARE

UPDATED PROGRAMME + TECHNICAL & COMMUNICATION + ADDED FUNCTIONS  
4500 SQM BTA



COMMUNICATION  
TECHNICAL  
ADDED FUNCTIONS

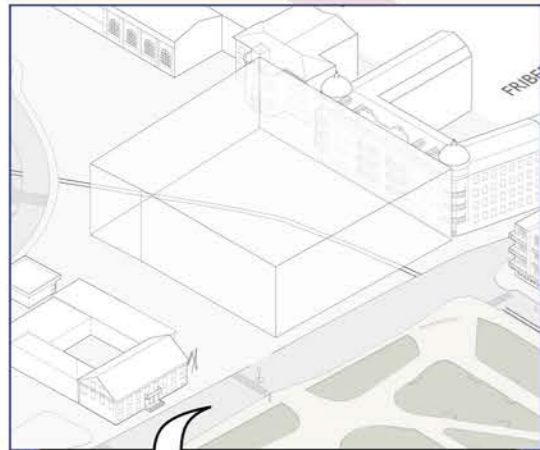


## CONCEPT / MODERN BAROQUE

To connect the building design to the city of Karlskrona we had the idea of making a modern interpretation of the baroque buildings in the city. To incorporate the baroque ideas we have worked with concave and convex shapes shaping the building. The baroque ideal is also a lot about light, and leading light in a certain direction. With a rasterized facade that filters the light into the building we have played with the light into the building. We also aimed to have windows in the end of the corridors, both for wayfinding reasons, but also for framing views.

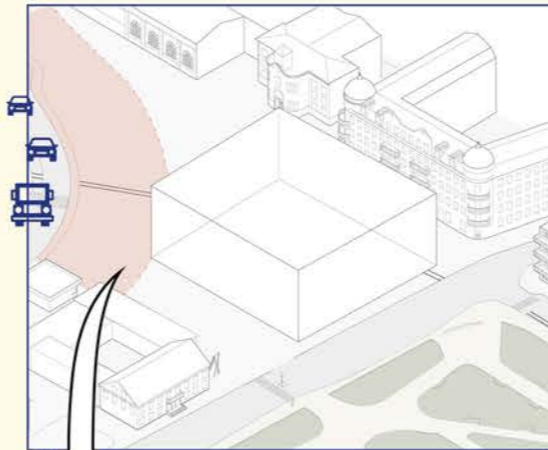
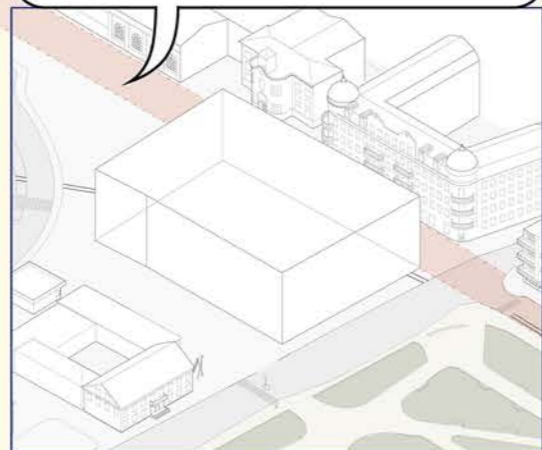
Around the plot we have found shapes that we used for the building design, for example the romb shape in the facade of the public bath building inspired us to the visible bearing system. The arch-shaped pattern in the facade is inspired by shapes found in Hoglands Park.

# CONCEPT / SHAPING THE BUILDING – THE STORY

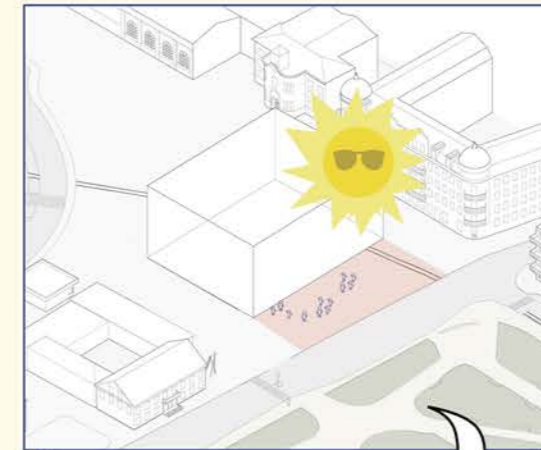


1. THIS IS THE ALLOWED VOLUME FOR THE PROJECT. WE FORM THE BUILDING BY...

2. ...KEEPING THE AXIS OF KUNGSGATAN

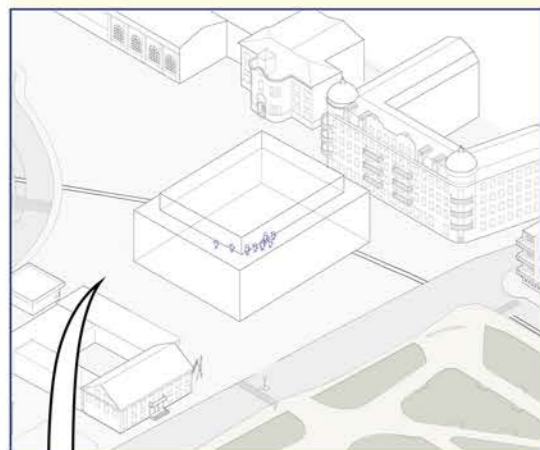
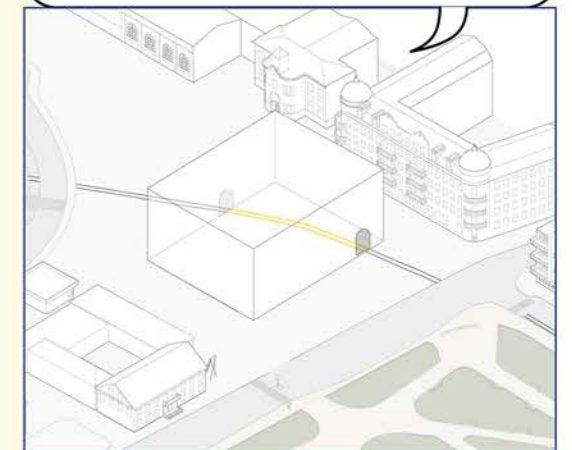


3. ...AND KEEP THE BUILDING SAFE FROM NOISE AND EXPLOSION RISKS FROM THE ROAD.

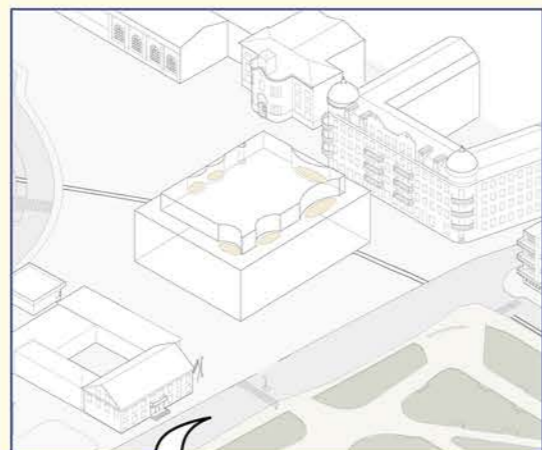


4. IN THE SOUTH WE CREATE A PLACE IN THE SUN WITH GREAT VIEWS OVER THE PARK.

6. THE HISTORICAL RAILWAY LEADS YOU TO THE ENTRANCES AND THROUGH THE BUILDING. IN THE NIGHTTIME IT LITS UP!

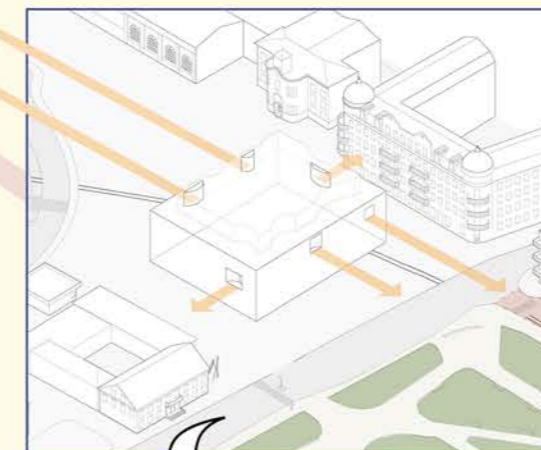
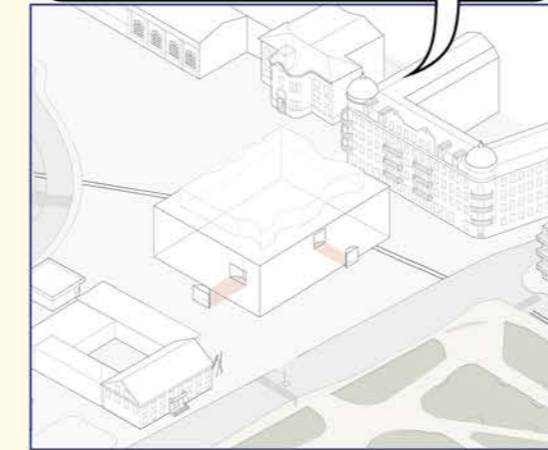


8. WE SHAPE THE TOP FLOOR TO GIVE ACCESS TO A ROOFTOP TERRACE FOR THE STAFF. AND ALSO INCREASE THE VIEWS OF FRIBERGSKA.

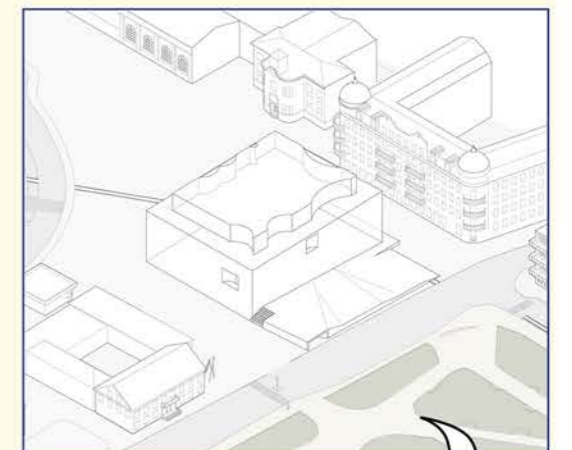


10. INSPIRED BY THE BAROQUE WE CARVE THE TOP FLOOR FOR A CHARACTERISTIC FACADE AND MAKE SPACE FOR SKYLIGHTS TO THE FLOOR BELOW.

12. WE KEEP ON CARVING ON THE OTHER FLOORS TO CREATE SPACES – LIKE “THE BALCONY FOR THE COFFEE BREAK”.

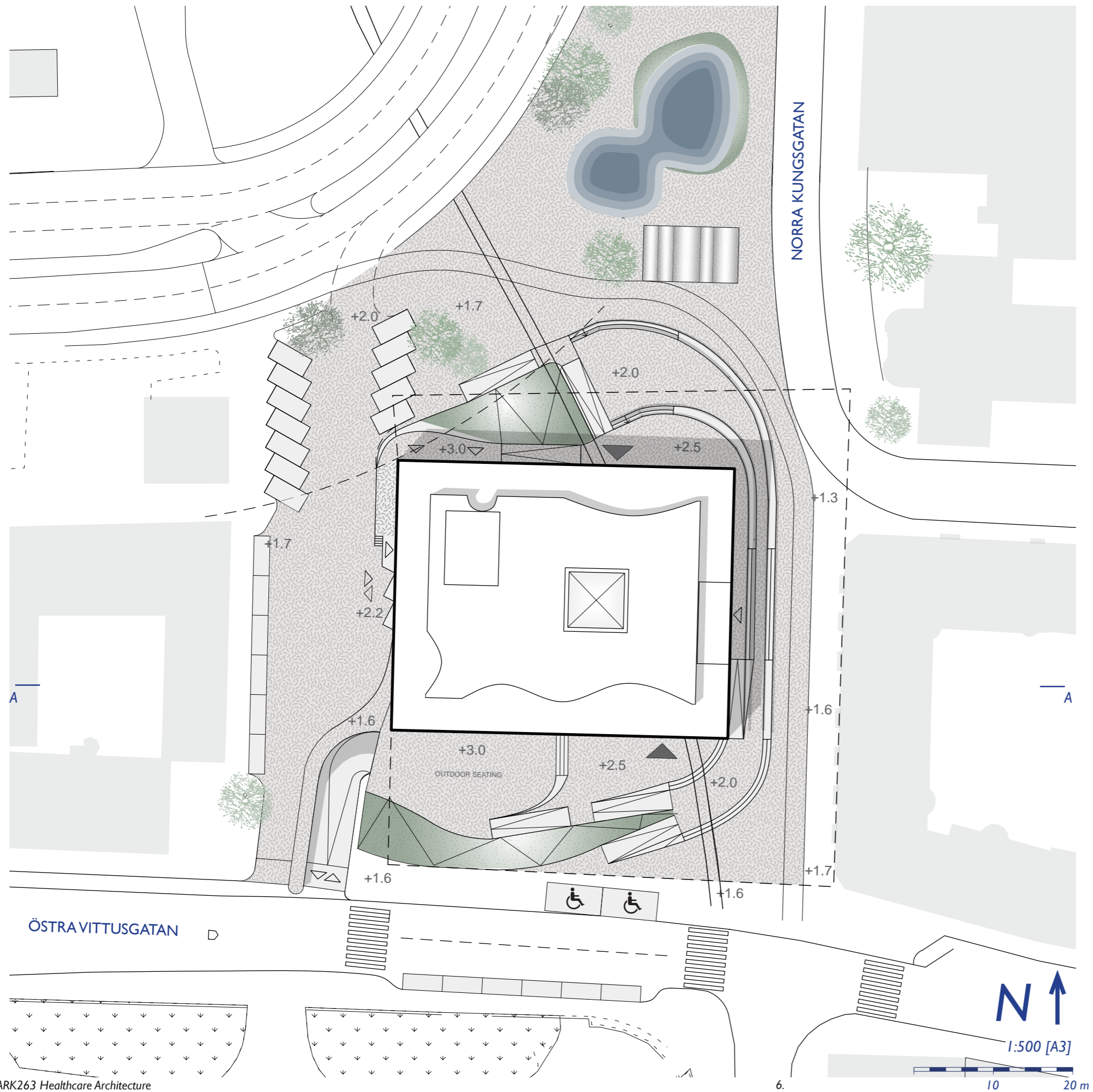


13. WINDOWS AND BALCONIES ARE PLACED TO FRAME VIEWS FOR ORIENTATION AND NICE SIGHTS.



15. TO MANAGE THE WATER FLOODING WE RAISE THE GROUND FLOOR AND SHAPE SURROUNDING LANDSCAPE.

TO BE CONTINUED...



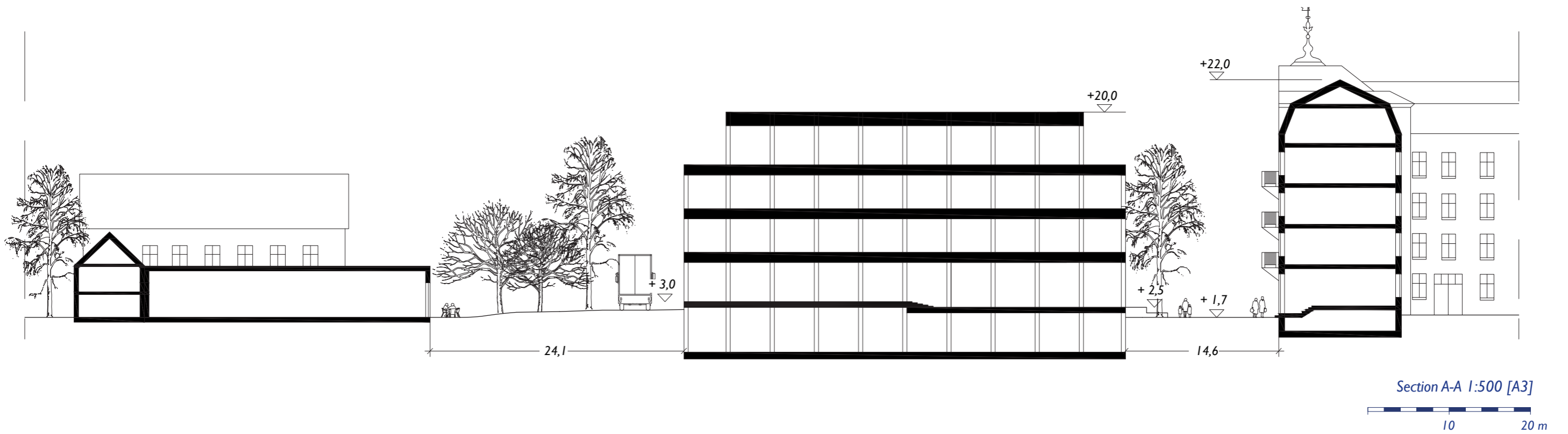
## SITE PLAN

To handle the height differences between the building and the site we have worked with platforms that are connected to the ground with stairs and slopes. For the landscape we let the organic shapes form, bringing in cobblestones and vegetation. The railway is helping the visitor find their way to the main entrance. In the south, one of the platforms is connected with the indoor café which makes it possible to locate outdoor seating here.

The garage that is located in the basement of the building is entered by a ramp in the south. Ambulances and goods deliveries enter in the south and leave in the north directly on Österleden. Some complemented parkings are located along Östra Vittusgatan.

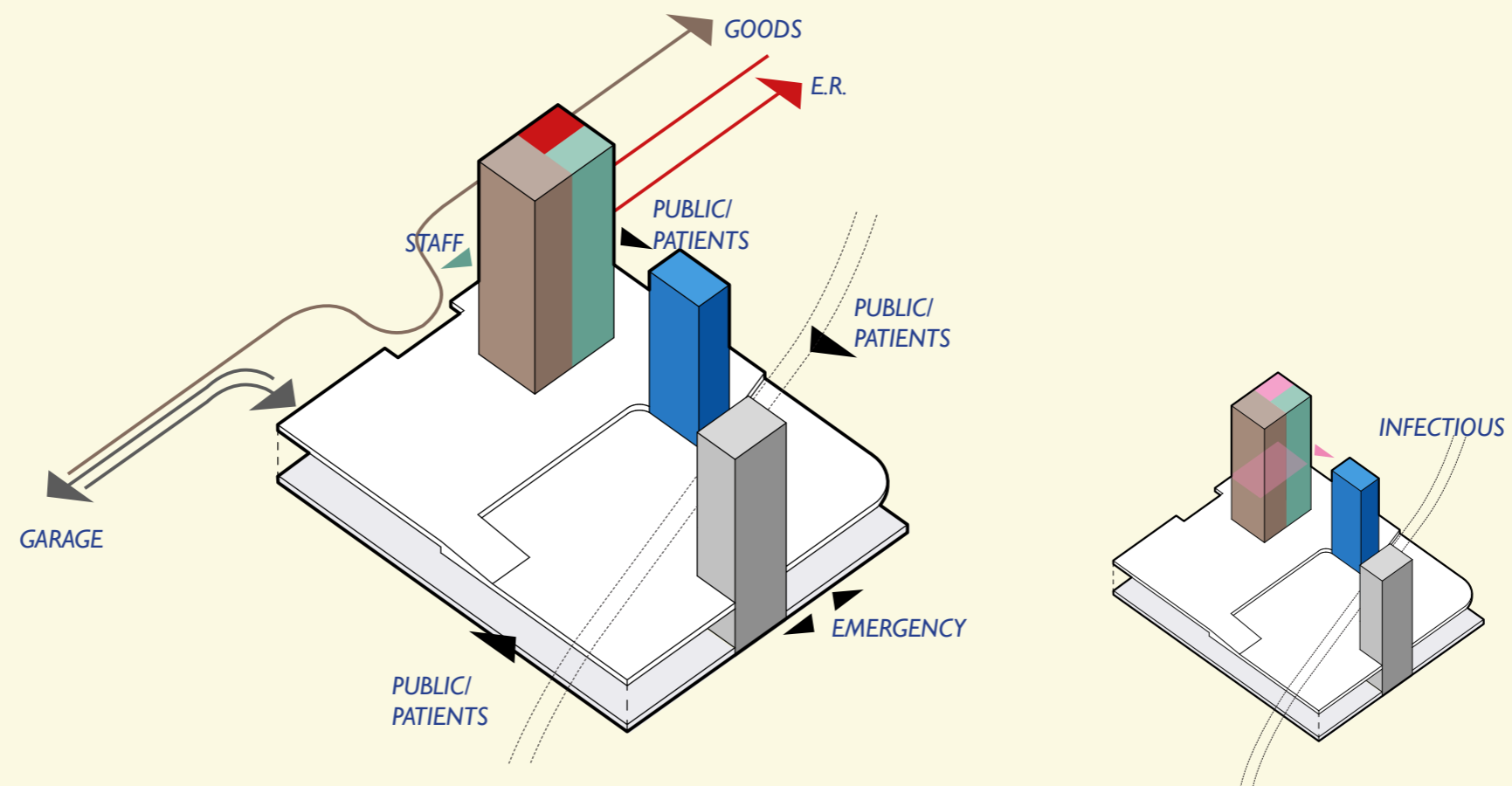
In the northern parts of the site, a sculptural bike pavilion, inspired by the building, is placed. Here we also locate a water landscape for helping to handle future flooding issues. In the eastern parts we want to highlight the continuation of Norra Kungsgatan where only bicyclists and pedestrians are allowed, giving the street its city character.





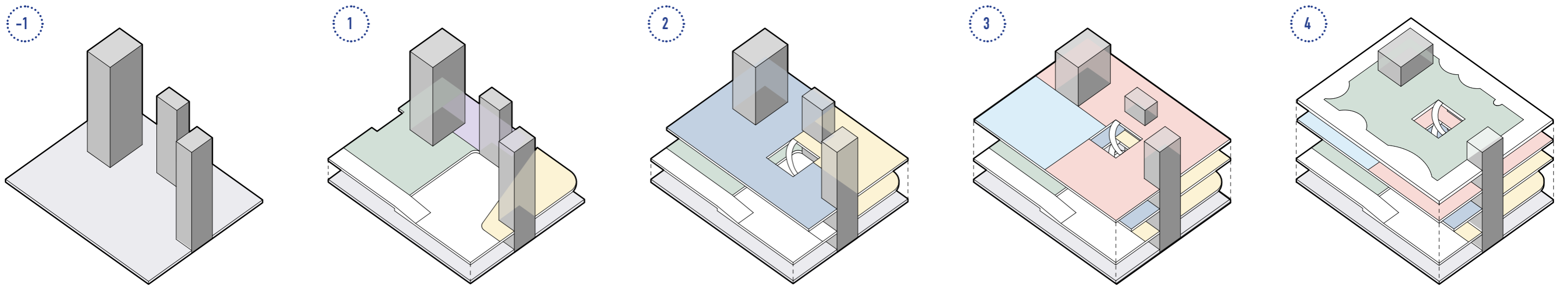
## FLows

The building's two main entrances are located when you follow the railway, one in the south and one in the north. There are several smaller ones for functions located on the ground floor. The building contains three main vertical shafts. One of them is for the staff, goods and E.R., one will be used in case of an emergency and the third is mainly for the patients. In case of a pandemic, one of the entrances and elevators in the staff and goods shaft can be closed off.



- STAFF
- PATIENTS
- GOODS
- E.R.
- INFECTIOUS

# DISTRIBUTION





# GROUND FLOOR

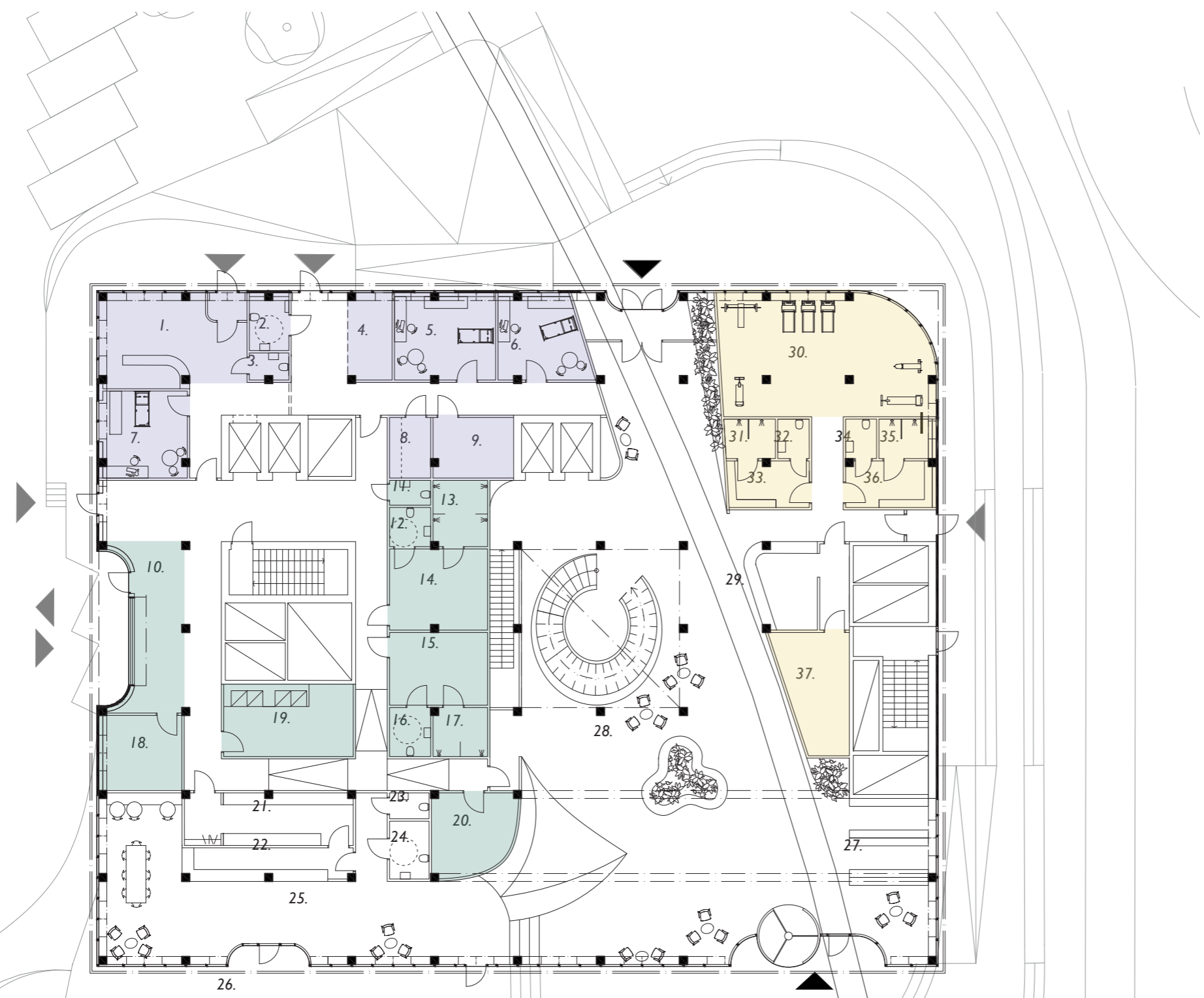
On the ground floor of the building, the children care unit and a part of the rehab unit is located together with staff spaces and public functions.

When entering the building by one of the main entrances, you will find the main reception following the railway. The railway also leads you to the main stair and the public elevators.

Waiting for an appointment the visitor can use the café located in the south with double height ceiling and views towards the park. Since the current healthcare center is located close to the city library we add a library hub in the ground floor to continue keeping those functions close to one another.

The gym, which is part of the rehab programme, is located close to Norra Kungsgatan and could be rented out in the evenings and weekends.

In case of a pandemic, the reception part of the children's care unit can be switched off and access to one of the elevators could be made, leading directly to the medical floor where parts also can be switched off, depending on how big of an outbreak.

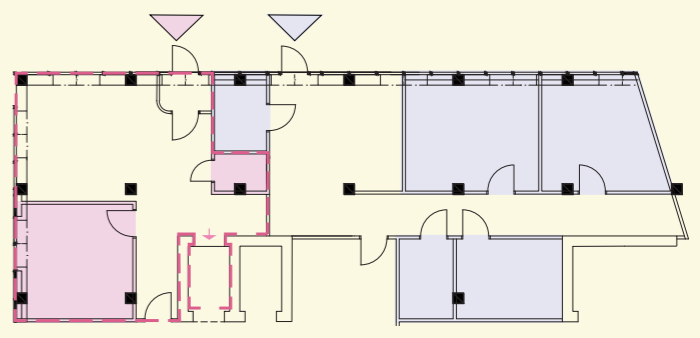


	Children Care	180 m <sup>2</sup>
	Public Gym	130 m <sup>2</sup>
	Hall (w. library hub and café)	520 m <sup>2</sup>
	Staff area	170 m <sup>2</sup>
	Technical Space	56 m <sup>2</sup>
	Communication	275 m <sup>2</sup>
<b>Total BTA</b>		<b>1400 m<sup>2</sup></b>

- |                            |                       |                             |                       |
|----------------------------|-----------------------|-----------------------------|-----------------------|
| <b>CHILDREN CARE</b>       | <b>STAFF</b>          | <b>HALL</b>                 | <b>REHAB</b>          |
| 1. Reception               | 10. Unpacking area    | 21. Preparation kitchen     | 30. Gym               |
| 2. RWC with changing table | 11. WC                | 22. Café desk               | 31. Shower            |
| 3. WC                      | 12. RWC               | 23. WC                      | 32. RWC               |
| 4. Stroller storage space  | 13. Shower            | 24. RWC with changing table | 33. Changing room     |
| 5.-7. Examination room     | 14.-15. Changing room | 25. Seating area            | 34. RWC               |
| 8. Coffee hub              | 16. RWC               | 26. Outdoor serving         | 35. Shower            |
| 9. Storage                 | 17. Shower            | 27. Library hub             | 36. Changing room     |
|                            | 18. Storage           | 28. Waiting hall            | 37. Equipment storage |
|                            | 19. Waste room        | 29. Reception               |                       |
|                            | 20. Cleaning room     |                             |                       |



1:250 [A3]



The groundfloor gets adjusted in case of a pandemic

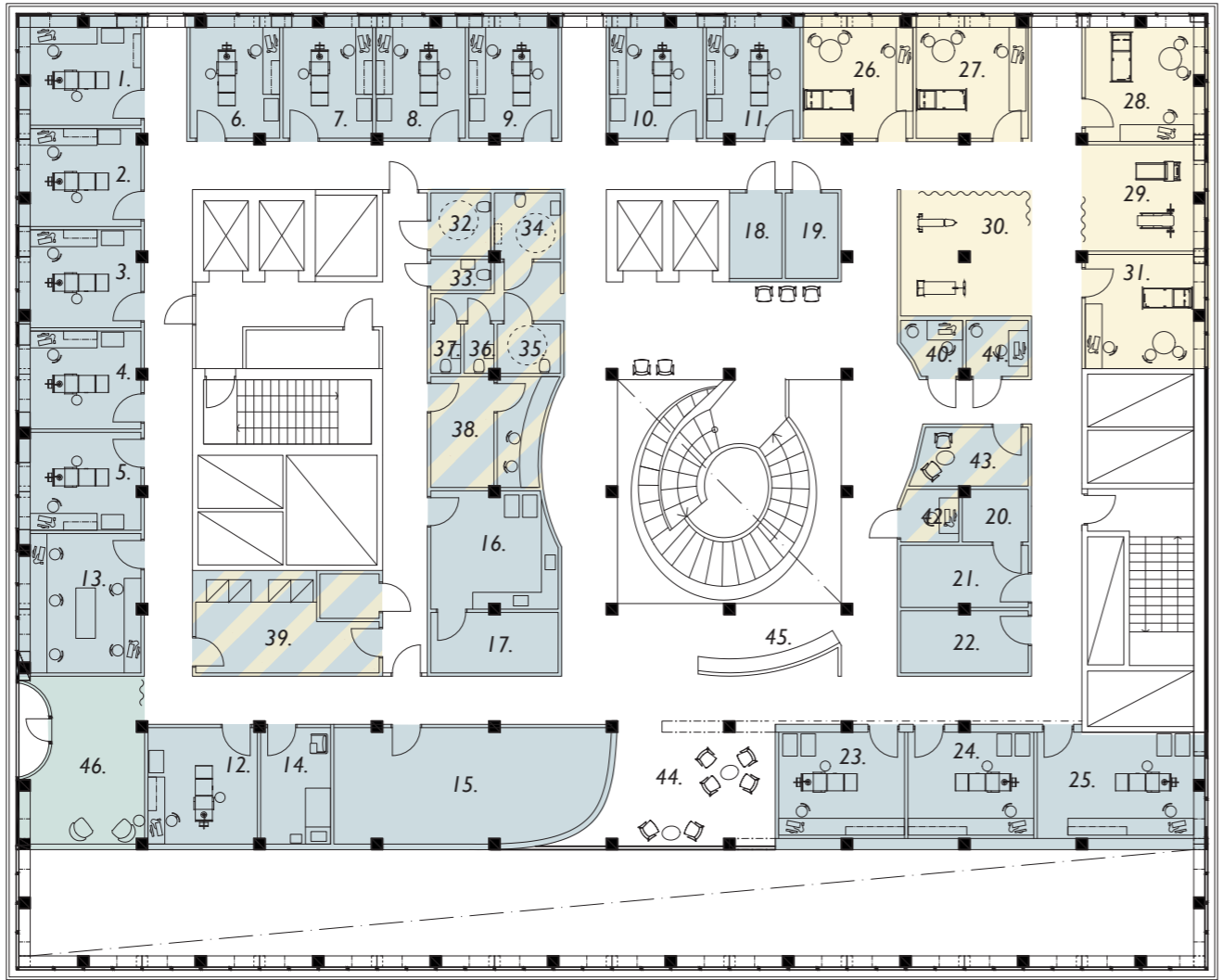
# SECOND FLOOR

On the second floor, the dental care and the second part of the rehab are located. The patients enter the floor from the big stair or the elevators, close to a small reception that can guide the patient to a doctor-pick up zone around the atrium or in the facade. The staff enter from their internal staircase where internal functions are gathered around.

The patients use the outer corridors in the plan, which often ends up with a window, helping the patients with the wayfinding and giving nice views over Karlskrona. The staff who can move all over the floor, also use the corridors in the core.

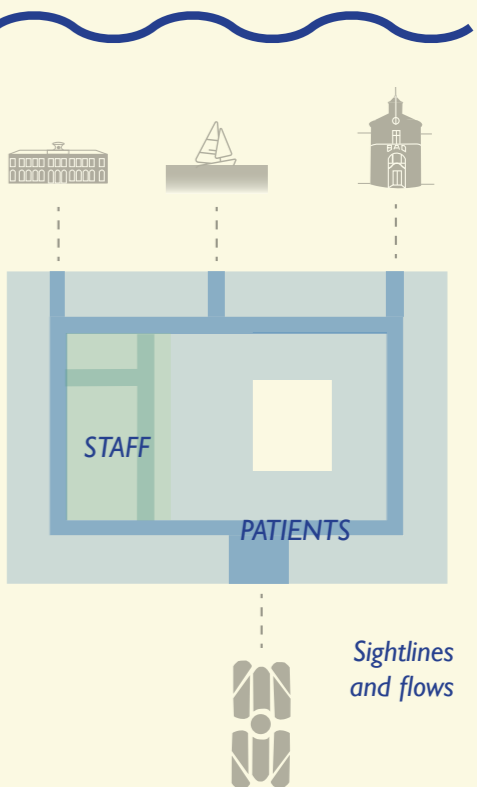
In the southwest facade a staff coffee hub is kept, with a withdrawn balcony, giving the staff easy access to get some fresh air during the day.

The rehab gym area is located in an open plan solution making the area flexible for its usage.



■ Dental Care	470 m <sup>2</sup>
■ Rehabilitation	150 m <sup>2</sup>
■ Staff Space	25 m <sup>2</sup>
■ Technical space	56 m <sup>2</sup>
■ Communication	500 m <sup>2</sup>
<b>Total BTA</b>	<b>1200 m<sup>2</sup></b>

- |                         |                          |                             |                |
|-------------------------|--------------------------|-----------------------------|----------------|
| <b>DENTAL CARE</b>      | 21. Photo room           | <b>SHARED AREAS</b>         | <b>STAFF</b>   |
| 1.-12. Treatment room A | 22. Panoramic X-ray      | 32. Staff RWC               | 46. Coffee hub |
| 13. Lab for prosthetics | 23.-25. Treatment room B | 33. Staff WC                |                |
| 14. Resting room        |                          | 34.-35. Patient RWC         |                |
| 15. Storage             | <b>REHAB</b>             | 36.-37. Patient WC          |                |
| 16. Sterile room        | 26.-28. Treatment rooms  | 38. Back-office + reception |                |
| 17. Sterile storage     | 29.-30. Open gym area    | 39. Waste room              |                |
| 18. Storage             | 31. Treatment room       | 40.-42. Telephone rooms     |                |
| 19. Storage textile     |                          | 43. Conversation room       |                |
| 20. Technical room      |                          | 44.-45. Doctor pick-up zone |                |



1:250 [A3]



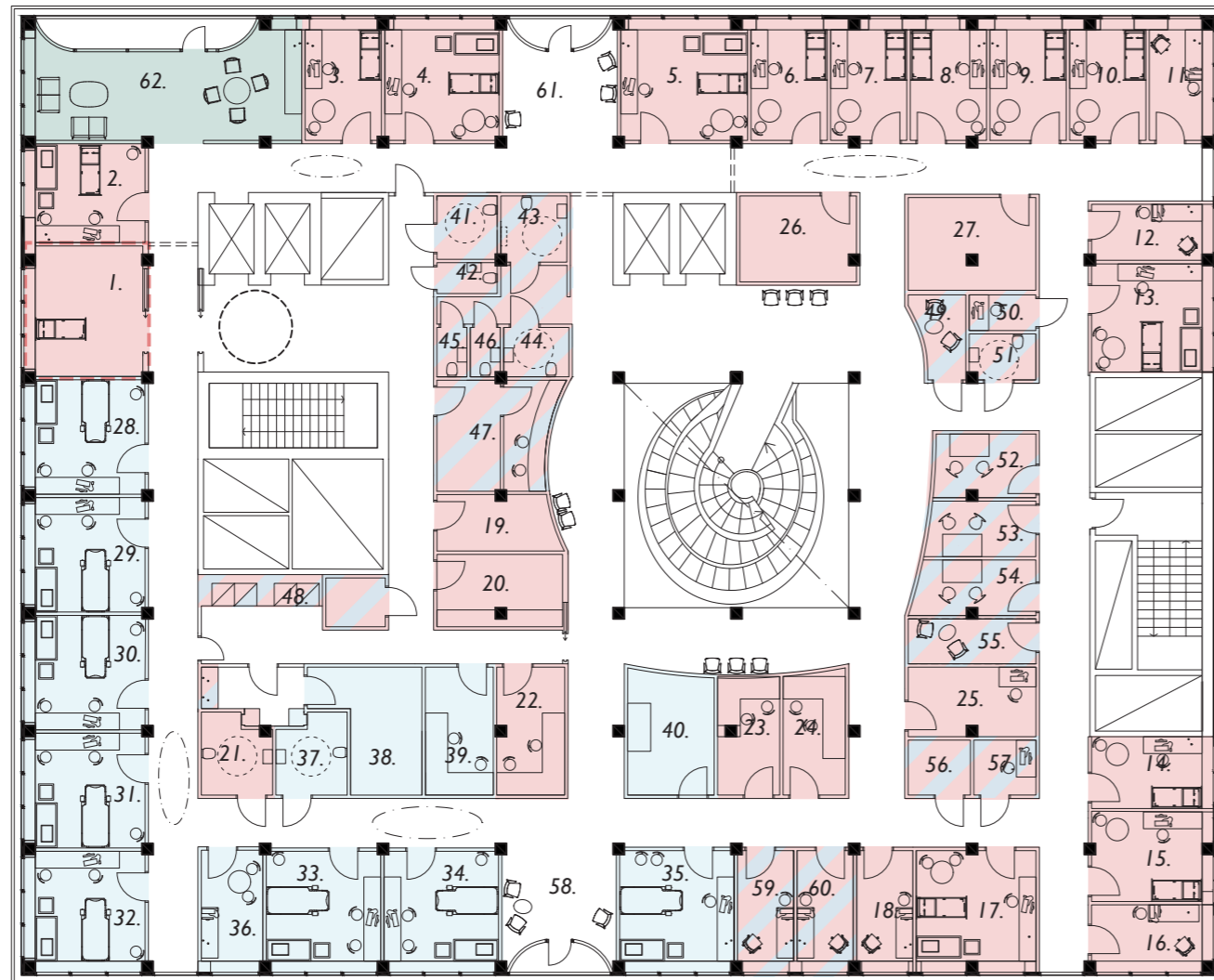
## THIRD FLOOR

On the third floor, the medical care unit and the women's care unit is placed. On the same way as in the second floor, the patients use the outer corridors while the staff also can use the corridors in the core. We want to highlight that the sampling areas for both units are placed next to each other for the possibility of shared space. The same applies to examination rooms, telephone rooms and conversation rooms.

Like on the former floor, the patient meets the doctor at the doctor pick up-zones, located close to the curved balconies close to the main staircase. The balconies are also creating sightlines through the building.

In the northern part of the floor, it's possible to shut down parts in case of a future infectious pandemic.

For the examination rooms, we have worked with three different sizes fitting to the 4,2 x 4,2 meter grid, flexible for different needs. The smallest ones could for example be used for chatting, vaccinations and prescription updates. The medium one could be used for measuring blood pressure, listening to the heart and lungs and getting stitches in. The large one could be used for ear and eye controls, gynecological and rectoscopic examinations.



Medical Care	460 m <sup>2</sup>
Women's Care	275 m <sup>2</sup>
Staff space	35 m <sup>2</sup>
Technical space	60 m <sup>2</sup>
Communication	570 m <sup>2</sup>
<b>Total BTA</b>	<b>1400 m<sup>2</sup></b>



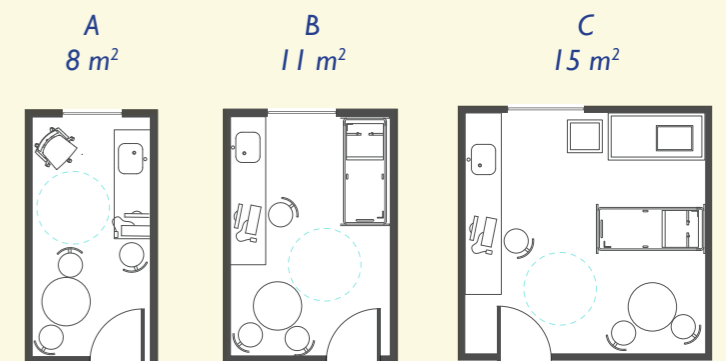
- MEDICAL**
- 1. E.R. Room
  - 2.-18. Examination rooms
  - 19. Storage sterile
  - 20. Desinfection room
  - 21. RWC Sampling
  - 22.-24. Sampling room
  - 25. Analyzing room
  - 26.-27. Storage

- WOMEN'S CARE**
- 28.-35. Examination/ treatment room
  - 36. Chat room
  - 37. RWC Sampling
  - 38.-40. Sampling

- SHARED AREAS**
- 41. Staff RWC
  - 42. Staff WC
  - 43.-44. Patient RWC
  - 45.-46. Patient WC
  - 47. Back-office + reception
  - 48. Waste room
  - 49. Chat room
  - 50. Telephone room
  - 51. RWC patient

- 52.-55. Therapy rooms
- 56.-57. Telephone rooms
- 58. Doctor pick-up zone
- 59.-60. Examination rooms
- 61. Doctor pick-up zone

- STAFF**
- 62. Coffee hub



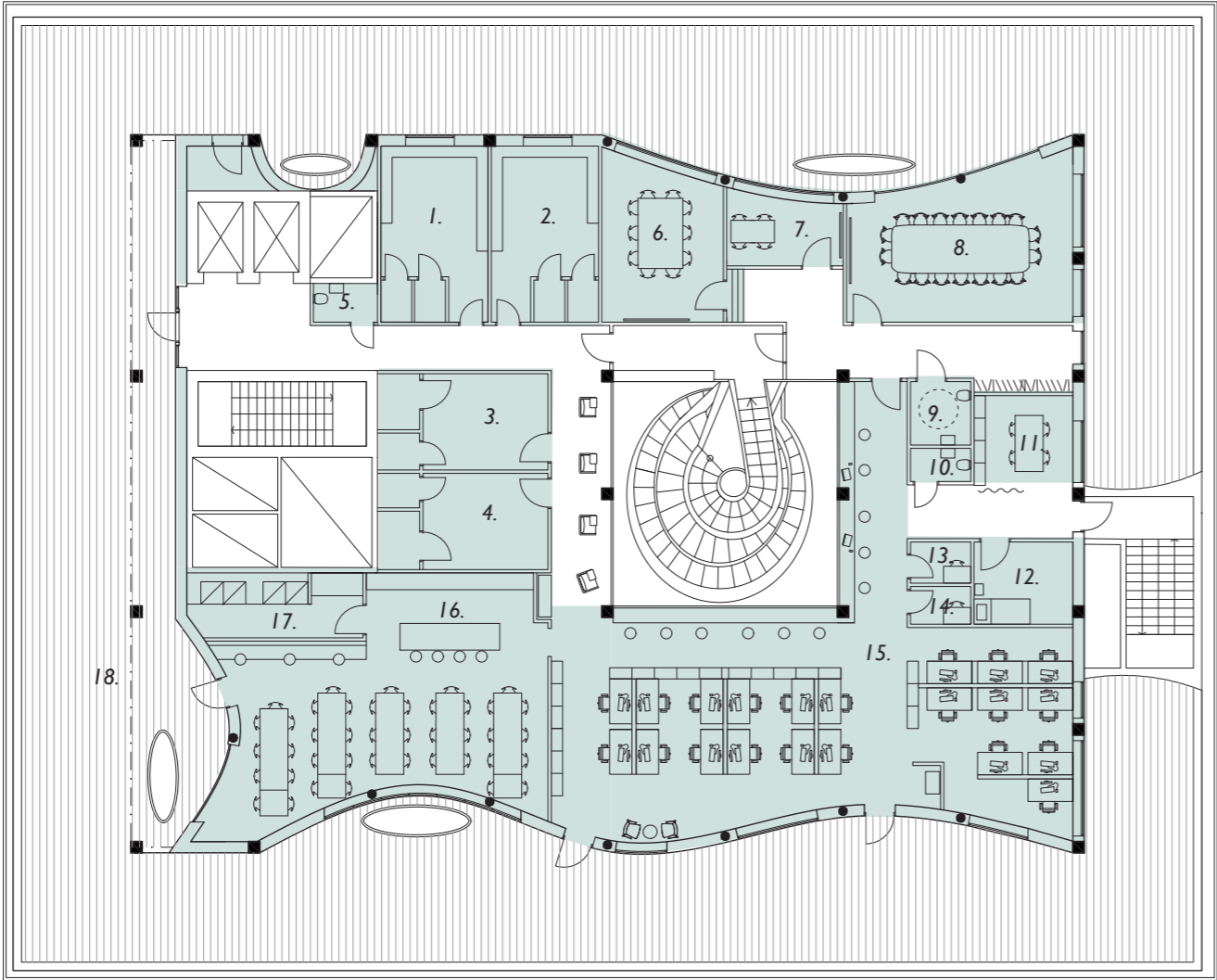
Modular examination room sizes

1:250 [A3]



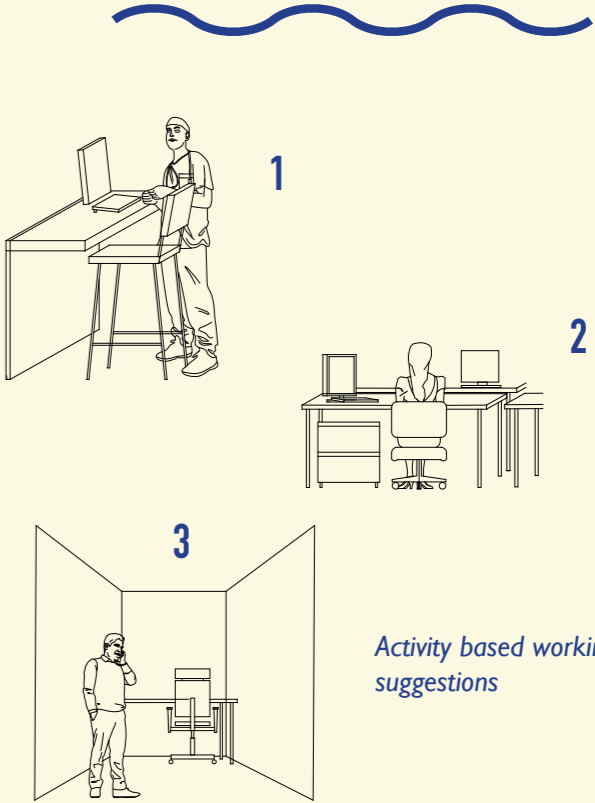
# FOURTH FLOOR

The fourth floor is a staff area only, where staff can eat lunch, change clothes and work. Here is an activity-based office space for the administrative work located. Close to the office space, the staff have access to conference rooms and a resting room. A big terrace for the staff to use surrounds the building. The concave shapes create exciting facades and give wind shelter during stormy days or a nice warm wall to lean towards when it's sunny. The concave shape makes room for a skylight to bring light in the corridors one floor down. The goal with this floor is to give the staff a space of their own where they can enjoy their breaks and get together with their fellow colleagues on the other floors.



■ Open office	200 m <sup>2</sup>
(27 desks, 11 touch down spots, 2 tele rooms = a total of 40 spots)	
■ Staff Space	100 m <sup>2</sup>
■ Common space	200 m <sup>2</sup>
▨ Technical space	30 m <sup>2</sup>
□ Communication (Terrace)	250 m <sup>2</sup>
	620 m <sup>2</sup>
<b>Total BTA</b>	<b>780 m<sup>2</sup></b>

- STAFF**
- 1.-4. Changing rooms
- 5. StaffWC
- 6.-8. Conference rooms
- 9. Staff RWC
- 10. StaffWC
- 11. Silent working space
- 12. Resting room
- 13.-14. Telephone rooms
- 15. Open office space
- 16. Lunch room / pantry
- 17. Waste room
- 18. Rooftop terrace

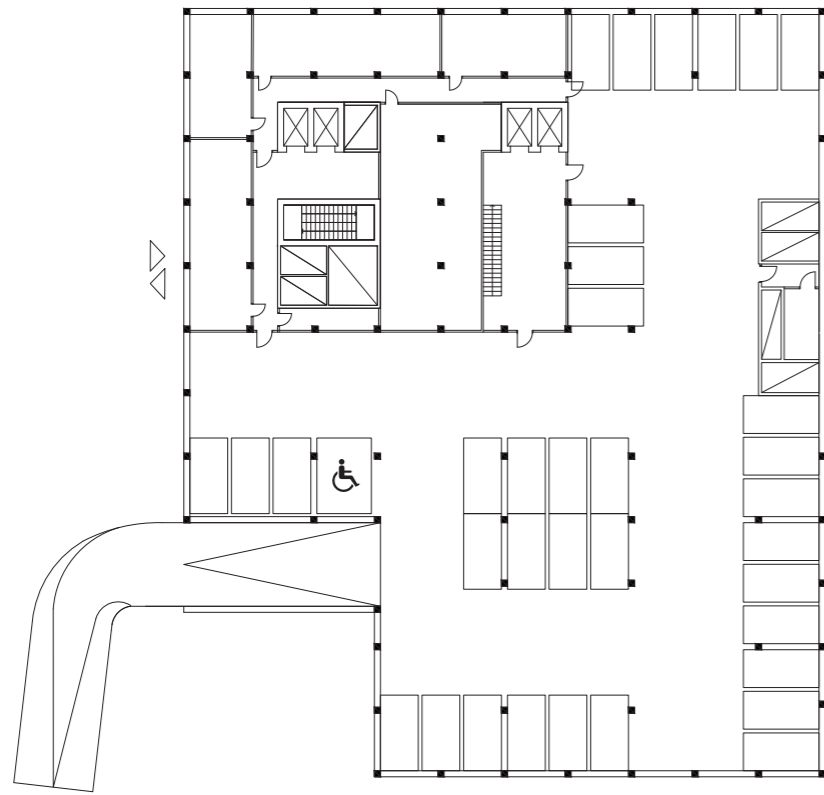


Activity based working suggestions

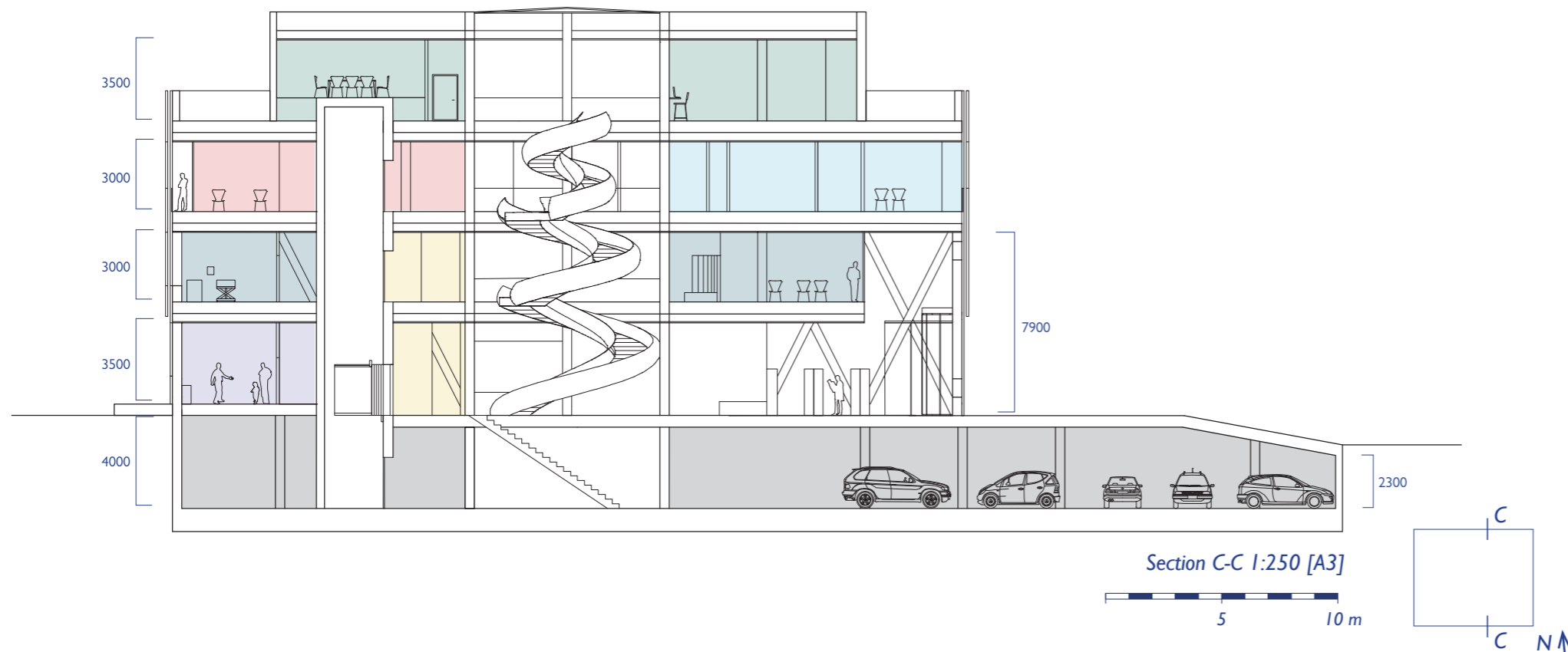
1:250 [A3]



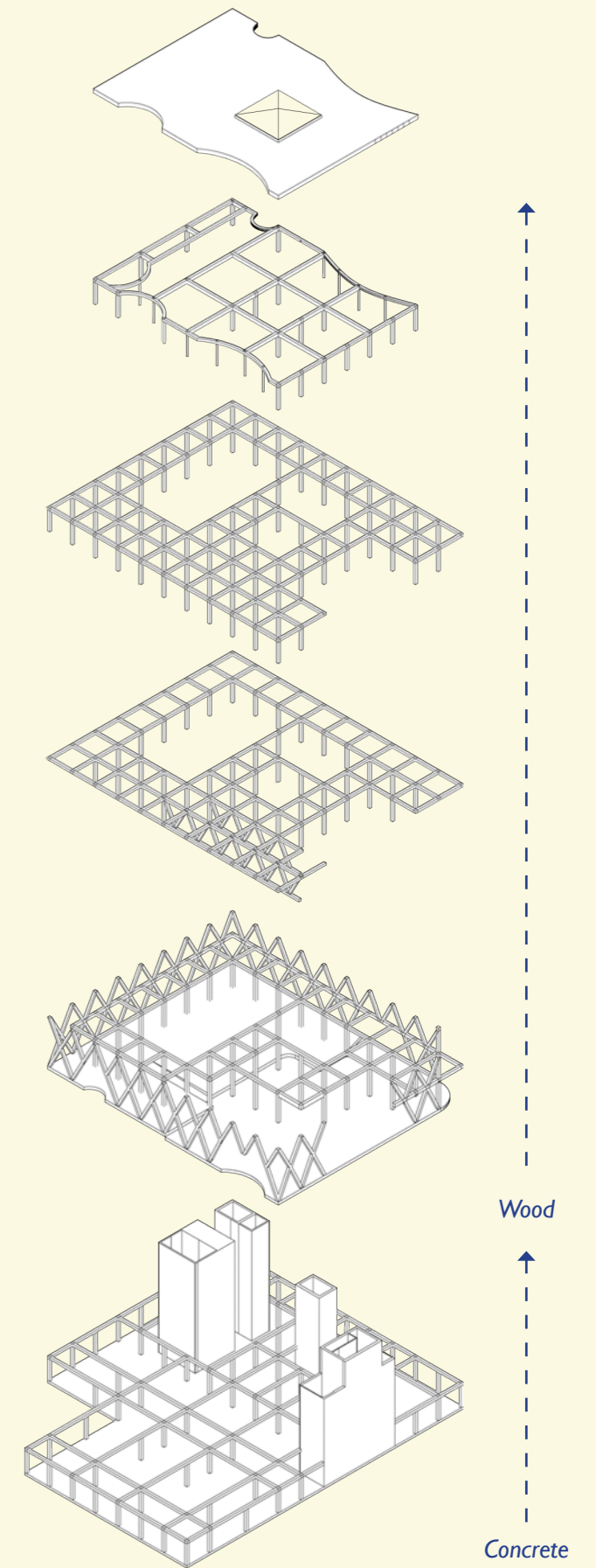
# BASEMENT FLOOR



Technical space 330 m<sup>2</sup>  
 Parking spots 35 + 1 accessible  
 Total BTA: 1900 m<sup>2</sup>  
 Basement floor 1:500



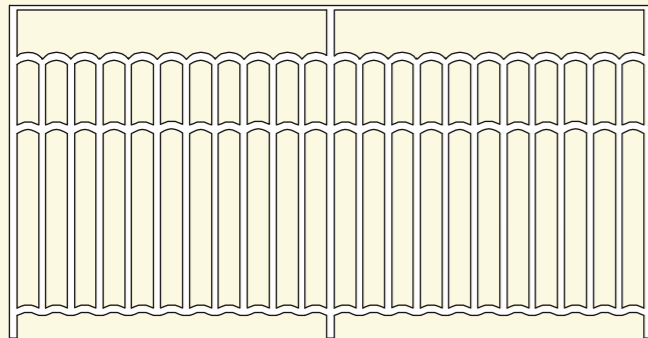
# CONSTRUCTION



## FACADES

For the facades, we have worked with a double facade consisting of a first layer of differently transparent glass and a second layer of ceramics. The pattern of the ceramics, consisting of the arch shape, are in two different sizes. It's smaller higher up in the building where the more private functions are kept, and bigger in the lower floor where it can be more transparent. The ceramics work as a built-in solar shading and bring an interesting light play on the floors. Holes in the ceramic facades are made framing the views and give access to direct daylight. The top floor has a wooden facade. Wooden ribs follow the curved walls and give a warm impression. The maintenance of the wooden facade works well on this floor since you direct access from the terrace.

The great crosses in the ground floor are inspired by the diamond shape of the Public Bath facade. This bearing system is visible through the glass facade, giving the building its characteristic look.



Fence 1:25 [A3]



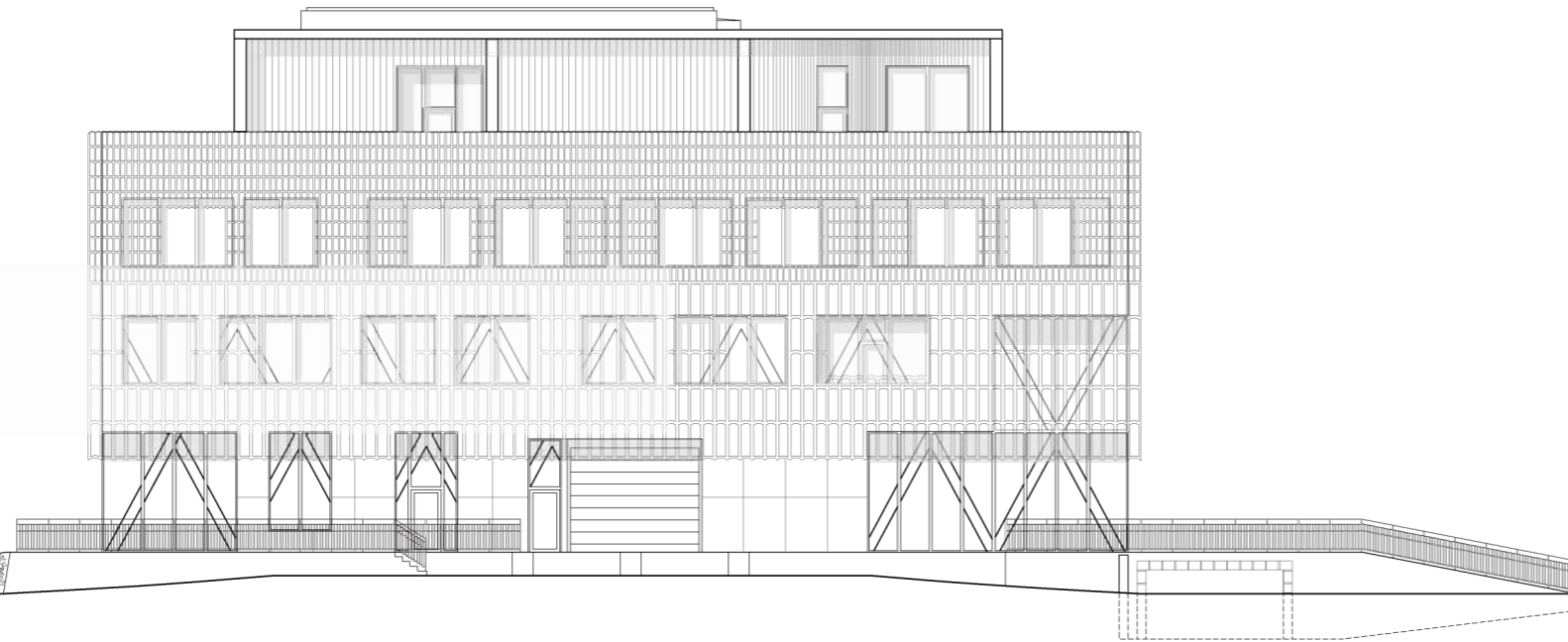
Facade south 1:250 [A3]



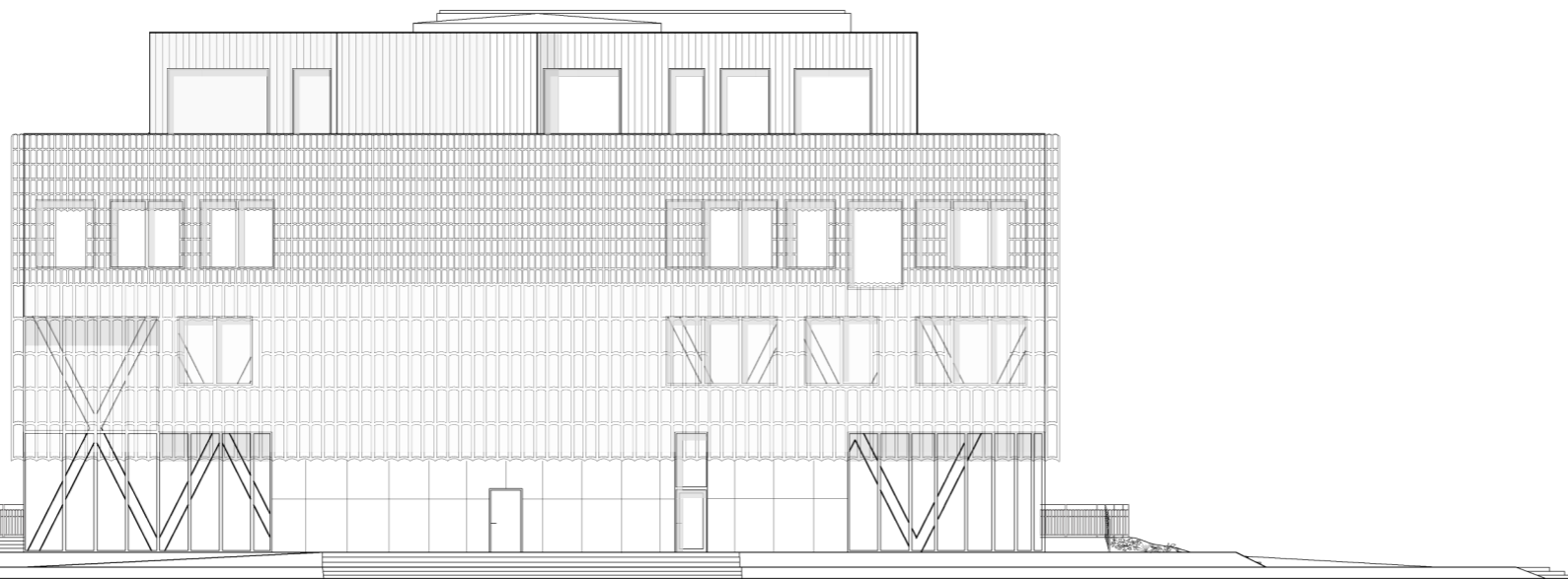
Facade north 1:250 [A3]



## FACADES



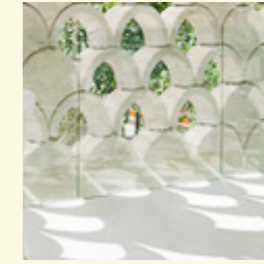
Facade west 1:250 [A3]



Facade east 1:250 [A3]



## MATERIAL PALETTE – OUTDOOR



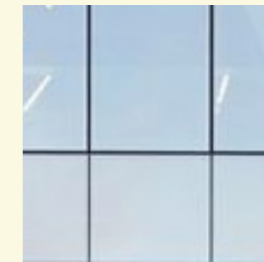
### CERAMICS

For the outer facade, ceramics is used as a transparent cover over the building, the ceramics strains the light into the building



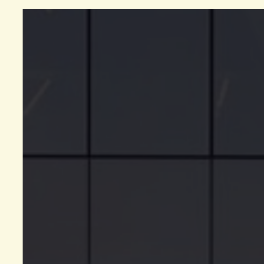
### DIAGONAL WOODEN PILLARS

Diagonal wooden pillars make the visible bearing system in the two ground floors.



### TRANSPARENT GLASS

For the inner facade, bigger glass sections is used for the ground floor bringing in light to the ground floor



### OPAQUE GLASS

Opaque glass in dark brown/black is used as the other material for the inner facade.

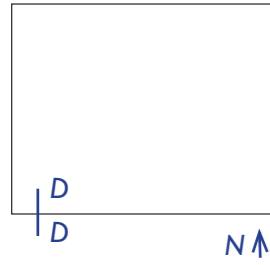


### WOODEN RIBS

The top floor facade consists of wooden ribs that are embracing the curved shapes.

# TECHNICAL DETAIL

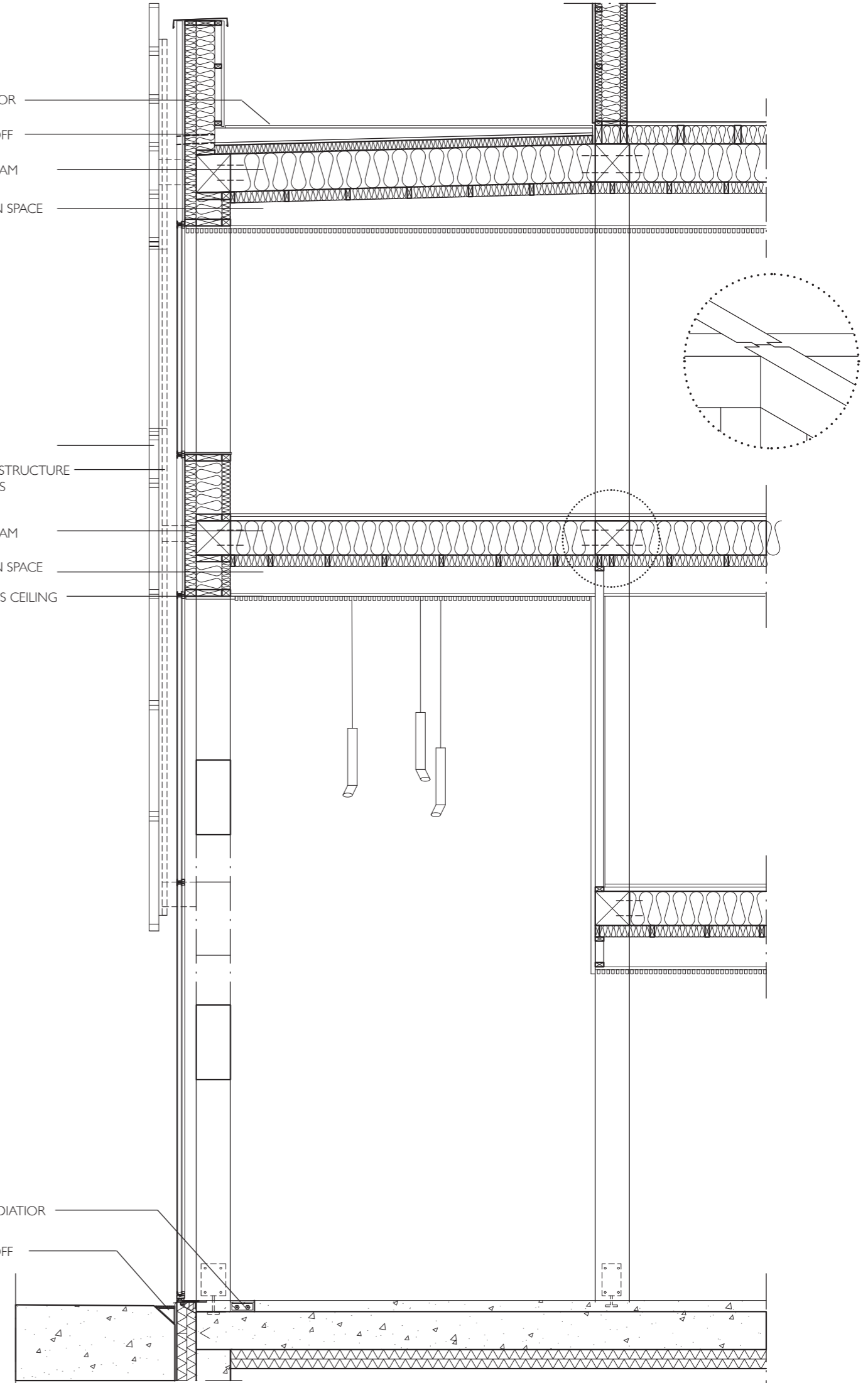
Facade and section D-D  
1:50 [A3]



- TERRACE FLOOR
- WATER RUNOFF
- GLUELAMB BEAM
- INSTALLATION SPACE

- CERAMICS
- SUPPORTING STRUCTURE FOR CERAMICS
- GLUELAMB BEAM
- INSTALLATION SPACE
- WOODEN RIBS CEILING

- RECESSED RADIATOR
- WATER RUNOFF





EXTERIOR VISUALIZATION

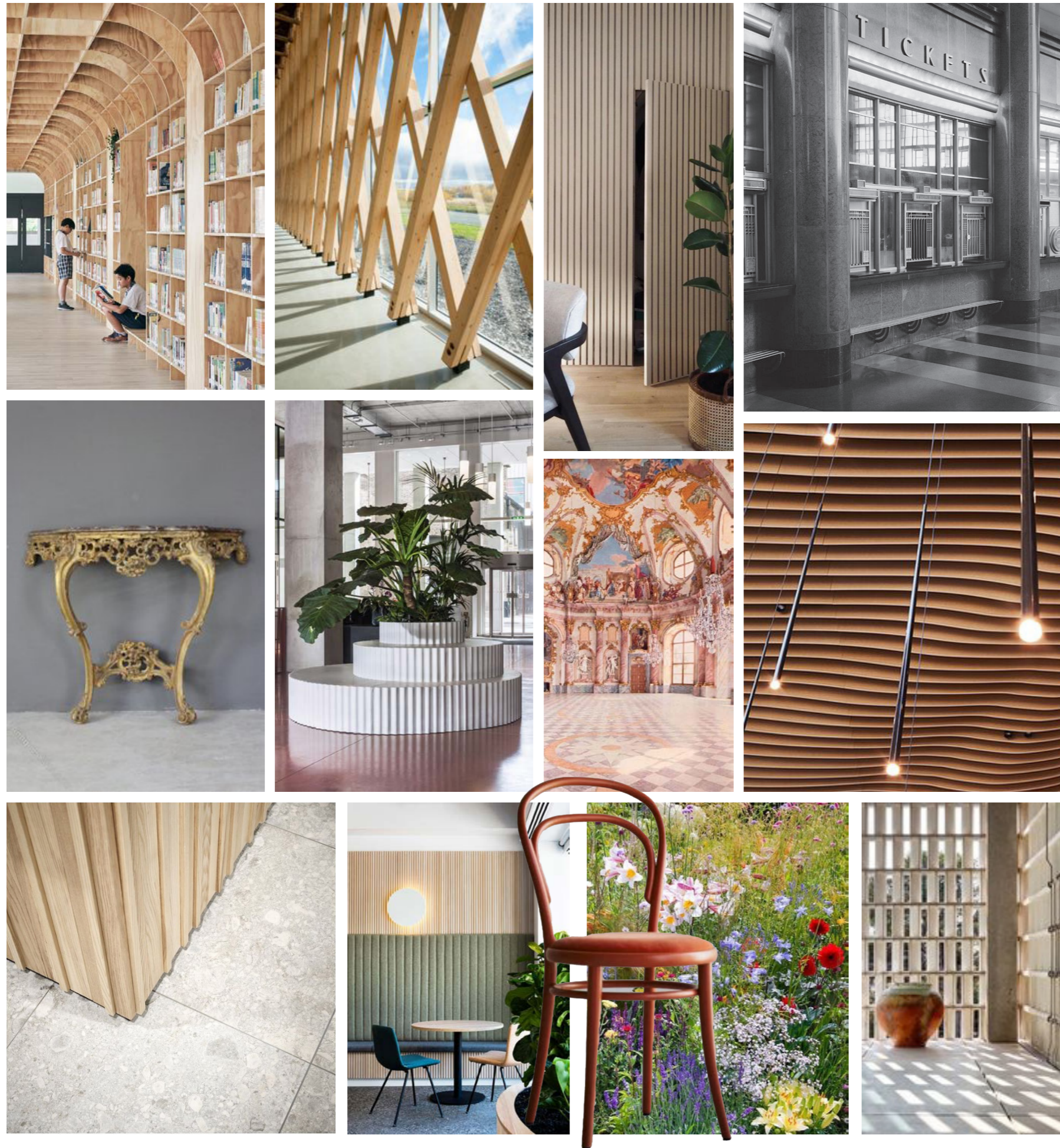


## EXTERIOR VISUALIZATION



EXTERIOR VISUALIZATION





## INTERIOR CONCEPT

For the interior concept, we want to bring in calming materials, mainly wood together with vegetation, to create environments where you feel safe and taken care of to all floors. Thanks to the wooden construction of pillars and beams in pine and the sculptural staircase in ash, the wood will be a material going through the whole building. The light is also an important factor and the ceramic facade and the bearing crosses will give beautiful shadows on the floor and walls.



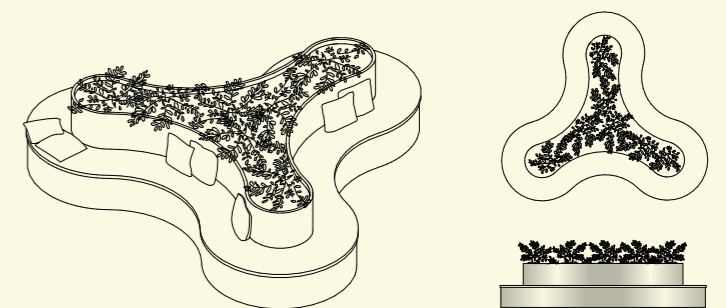
## GROUND FLOOR

On the ground floor, the railway guides you from the entrances to the main reception. The railway will be illuminated at night time and wintertime. The main reception is inspired by an old railway station's ticket stand along a wall, but interpreted in a modern way.

The wooden panel walls, both straight and curved forms, embrace the visitor and the light grey polished terrazzo floor let the light fall deep into the building. Wooden ribs in the ceiling conclude the feeling of an embracing wooden box, and in the area with double ceiling height, modern lamps hang.

For the furnitures, we want to work with a mix of modern lounge furnitures, and a hint of the baroque in the details.

### Waiting furniture



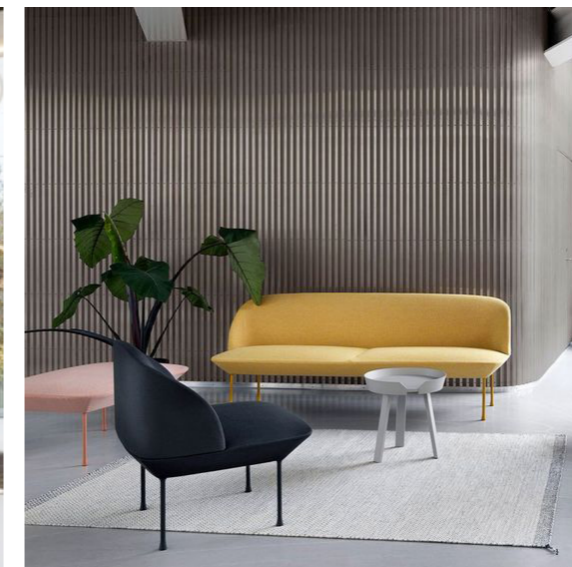
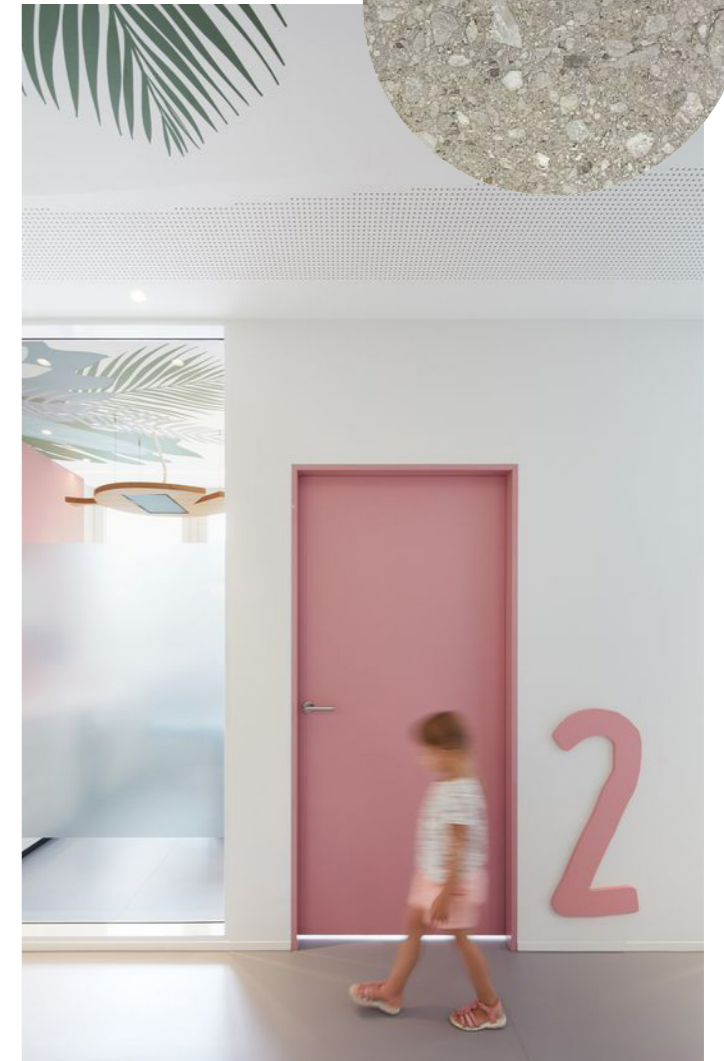
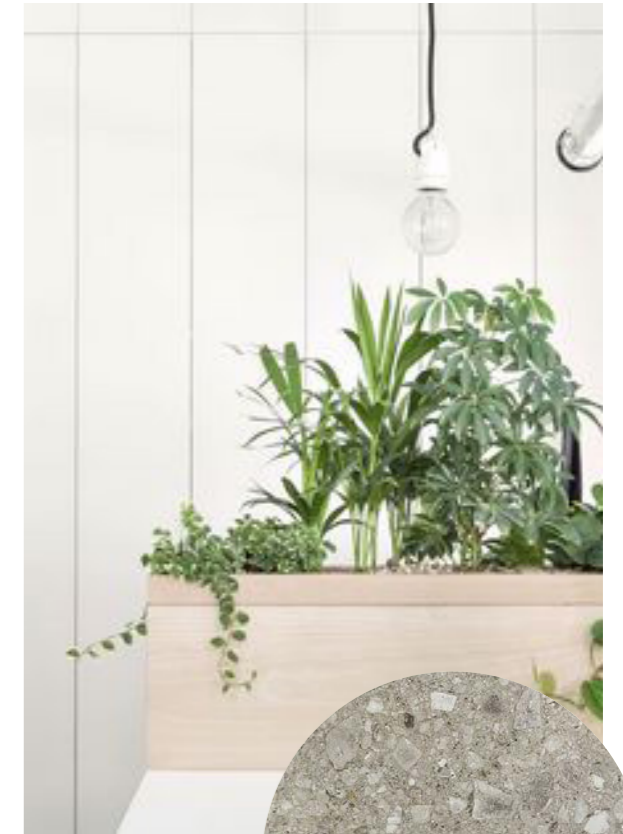
INTERIOR VISUALIZATION



## CORRIDORS, ATRIUM & DOCTOR PICK-UP ZONES

At the medical floors, from the big wooden sculptural stair the patient finds the doctor pick-up zones around the atrium or in the facade, easily spotted from the atrium. The doctor pick-up zones are light thanks to the atrium, windows or a balcony, where the patient can go out. The characteristic concave shapes are found in walls and glass in the pick-up zones. The furnitures will be surrounded by plants.

Most of the corridors end up with a window, so it's easy to locate yourself in the building. By coloring the doors to the examine rooms in different colors the wayfinding increase.



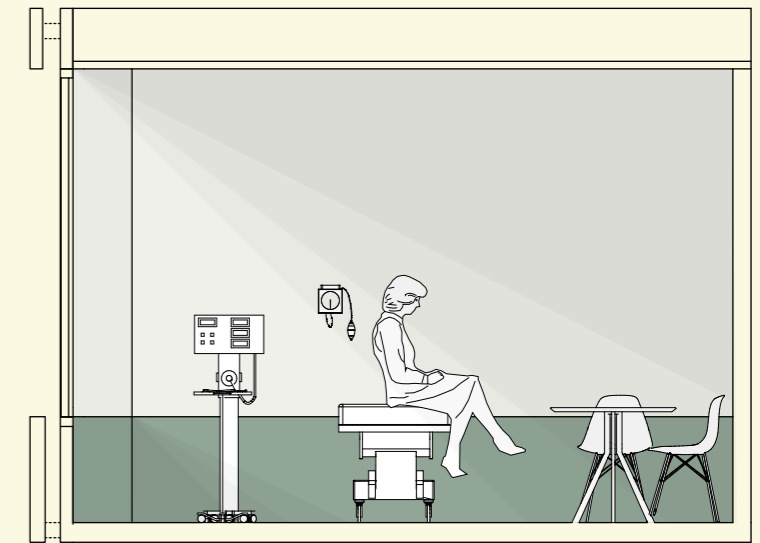
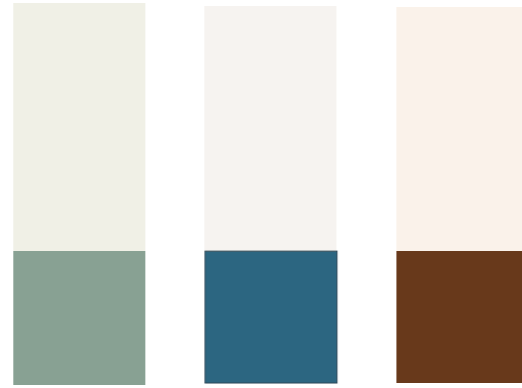
INTERIOR VISUALIZATION



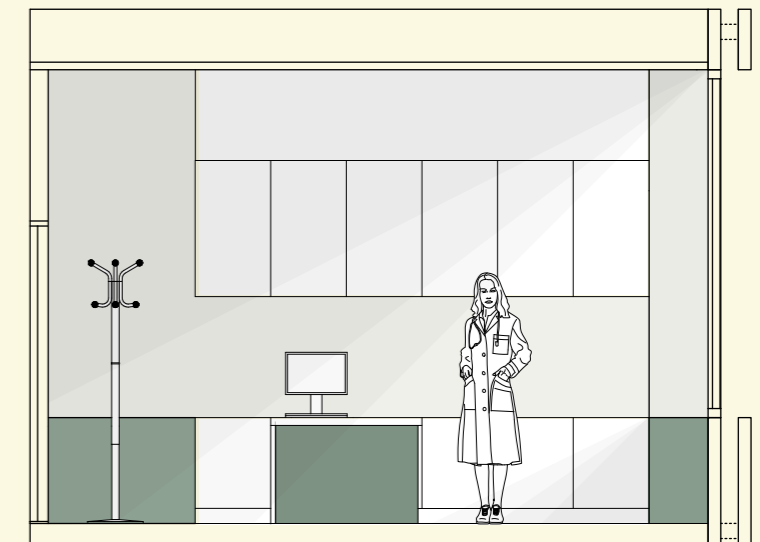
## EXAMINATION ROOMS

In the examination rooms, we have worked with three color schemes, one for each size of the rooms. For each color scheme, we have chosen two different wall colors, a darker one on the lower end of the room till 700mm and a lighter one the rest of the wall. According to that; a matching floor and a ceiling going hand in hand with the wall colors. The rooms include a good office space together with a lot of storage. From the ceramic facade a lightplay will embrace the room and give a beautiful expression.

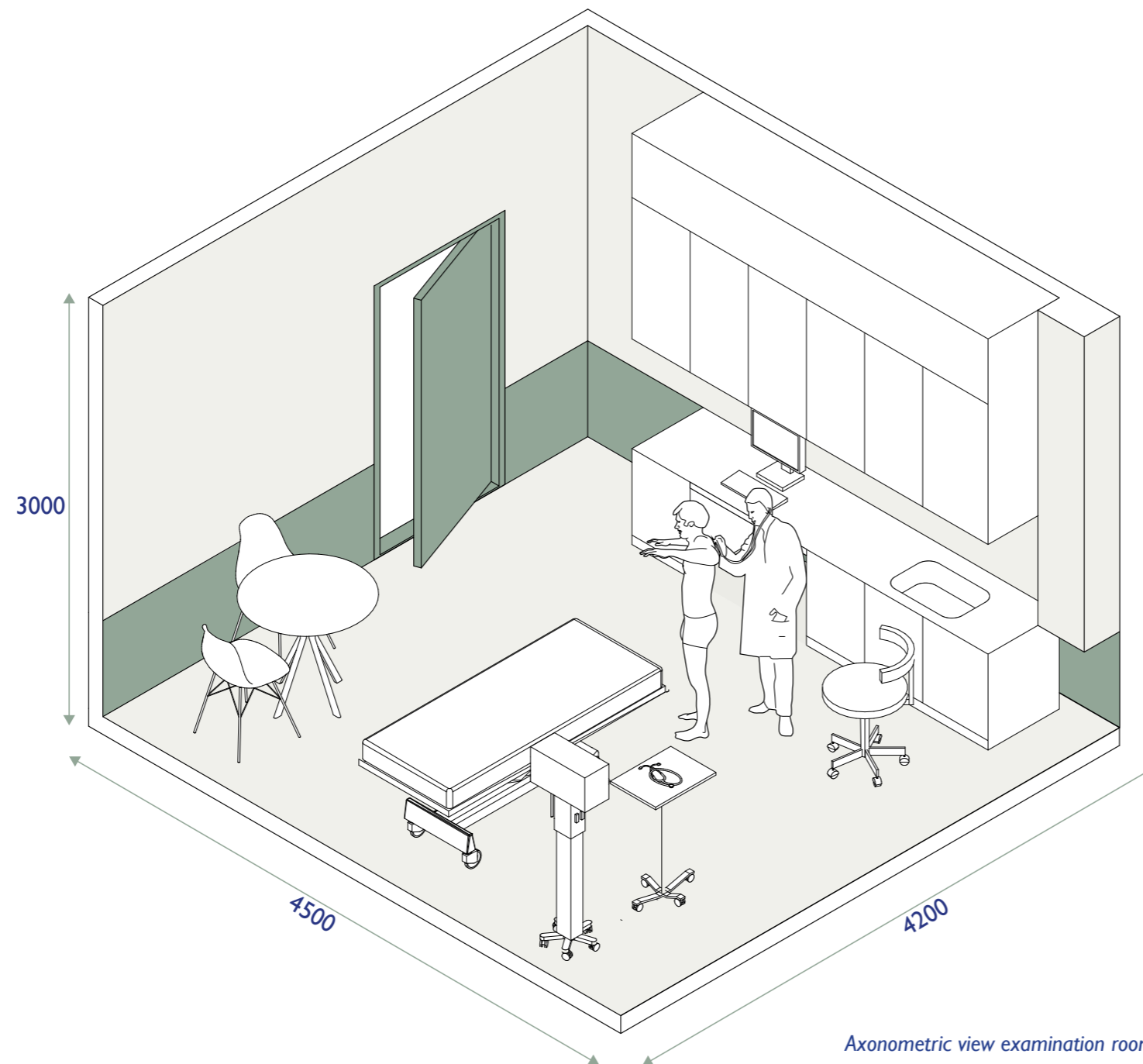
TYPE 1      TYPE 2      TYPE 3



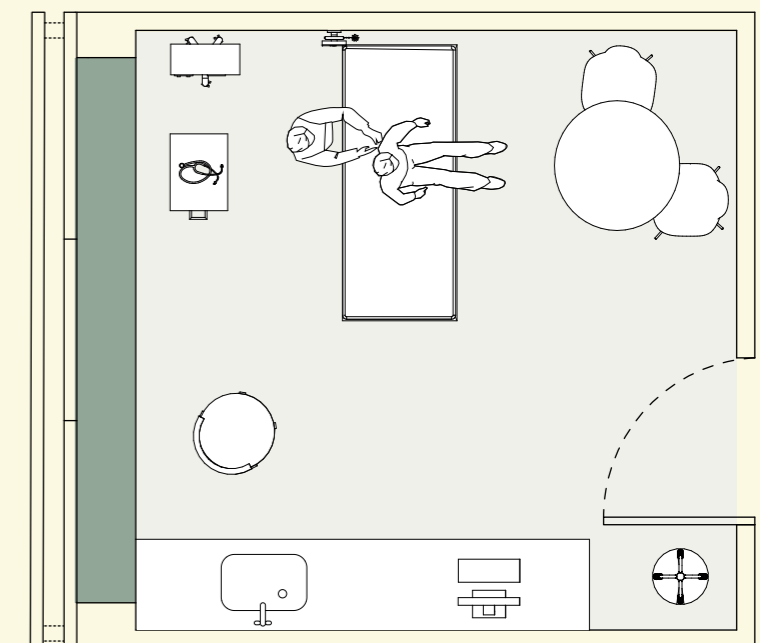
Elevation A examination room 1:50



Elevation B examination room 1:50



Axonometric view examination room



Plan examination room 1:50 [A3]





## INTERIOR VISUALIZATION

