

HARBOUR HEALTH

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ARK262 | HEALTHCARE ARCHITECTURE | 2016



BACKGROUND

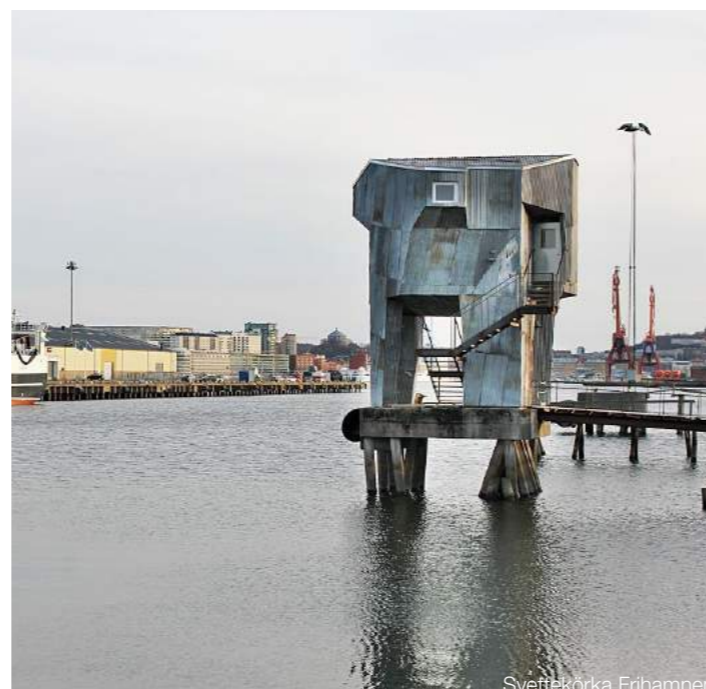
Gothenburg is growing, and with an increased population, the need for healthcare will grow aswell. According to forecasts, this means an increase of 100 000 specialist visits, compared to today's numbers. At the same time there is a desire to bring healthcare closer to the patient and bringing the functions of open specialist care and primary care closer together.

To meet the needs, two nearby hospitals are now being planned in Gothenburg. One is to be placed in Högsbo and the other in Frihamnen.

Frihamnen is an upcoming district located on Hisingen, just off the bridge Götaälvbron and very close to the city core. Today it serves as a harbour area, but by 2035 this will be the place for 20 000 inhabitants and around 20 000 workplaces. Harbour Health Nearby Hospital will be built in the first stage and the plan is to have it up and running by 2023.



Pöl Harbour, Frihamnen



Svettkörka, Frihamnen



Göteborg, Frihamnen



Göteborg Harbour

THE HUMAN IN FOCUS

The hospital will be used by two main groups, with different needs and preconditions:



The users

- Not familiar with the environment
- Only users when in need of professional care
- All ages



The staff

- Familiar with the environment
- User of the place in her/his daily work life
- Working age

Calmness and a feeling of safety is very important for the patients and visitors, but the hospital should at the same time serve as an efficient, well functional and pleasant work environment.

Three different factors have a particularly large impact on people's feelings, well being and experiences; the influence of nature, light and privacy.

NATURE



Pain

Nature is an effective positive distraction, which can reduce the perception of pain and the use of medication.

Length of stay

Nature views are healing and can affect the length of stay.

Stress

Exposing patients to nature lessens stress and anxiety.

Satisfaction

A view of nature increase staff and patient satisfaction.

DESIGN SOLUTIONS

- View of nature
- Accessible gardens with different functions
- Green terraces

DAYLIGHT/LIGHTING



Pain

Daylight reduces pain and the amount of pain medication.

Satisfaction

Good light conditions increase staff satisfaction.

Sleep

The natural and artificial lighting in patient rooms should follow the natural light during the day to provide good sleeping conditions.

Depression

Exposure to light is effective in reducing depression and improving mood.

DESIGN SOLUTIONS

- Large windows letting in a lot of light
- Atriums
- No dark or deep volumes
- Rooms with a view and daylight

PRIVACY



Integrity

An open waiting area may cause a feeling of exposure.

Satisfaction

Being able to stay for a longer time as a relative increases the satisfaction for both the patient and his/her relatives.

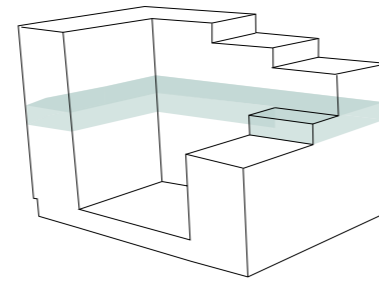
DESIGN SOLUTIONS

- Spacing between buildings >15 meters
- Family zone in patient room
- Enclosed areas within bigger waiting areas
- Gardens with different degrees of privacy

VISION

I come here to get well, not because I'm sick.

It is a building that creates a healthy atmosphere and sets the user in a specific frame of mind. Here you will feel safe, calm and healthy. The visitors well-being will be prioritised and focus lies in greenery, light and privacy. Waiting areas for example, where visitors could end up spending time in should be looked upon closer.

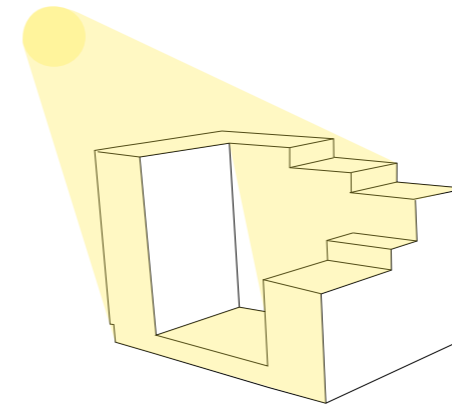


GOALS

An efficient, well functional and pleasant work environment. Patients and visitors should feel calm and safe.

STRATEGY

Horizontally located departments for efficiency and easy way finding.

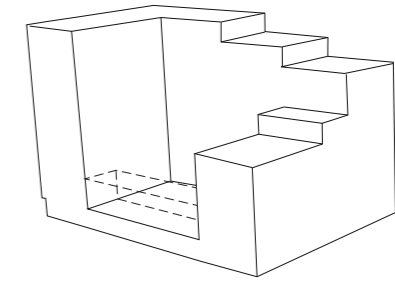


GOAL

Making use of natural conditions, such as the sun and views.

STRATEGY

Adapt form to create good daylight conditions and pleasant outdoor environment.

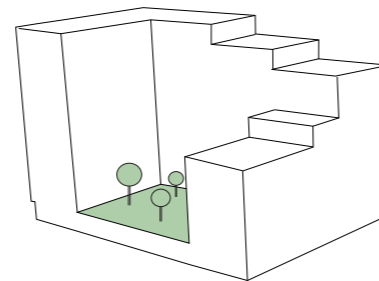


GOAL

A flexible building to accommodate future needs.

STRATEGY

A framework that allows changes and expansions.

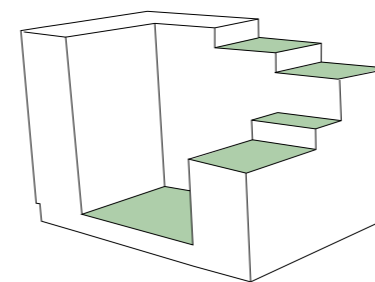


GOAL

Patients and visitors should feel calm and safe.

STRATEGY

Landmarks for easy way finding.

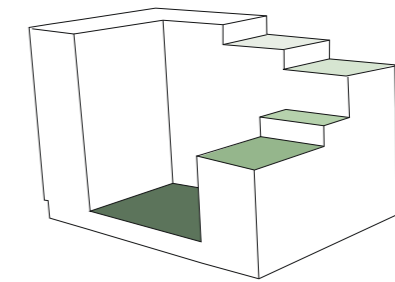


GOALS

A good work environment. Patients and visitors should feel calm.

STRATEGY

Accesible green areas for all users.



GOAL

Mind the integrity.

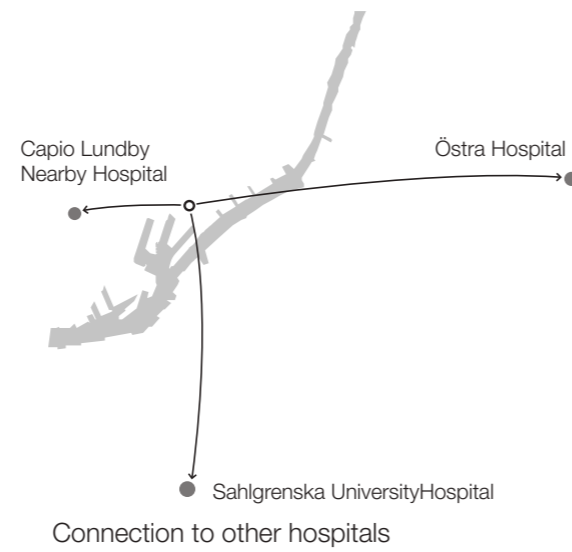
STRATEGY

Various degrees of publicity and privacy for both staff and visitors.

SITE ANALYSIS

The hospital site is well connected to the city, which will make it very accessible when arriving with public transport, on foot, bike or car. It is located just next to Frihamnen bus and tram stop, and increases the chances of staff and visitors to get there in an environmentally friendly way.

The light conditions on the site are very good and there are several green areas in the neighbourhood.



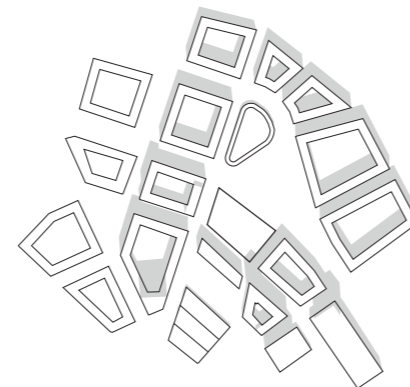
Connection to other hospitals



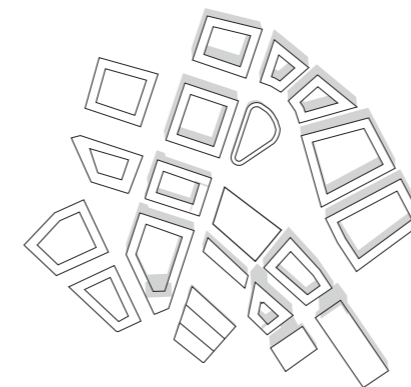
Flows of pedestrians and bikes



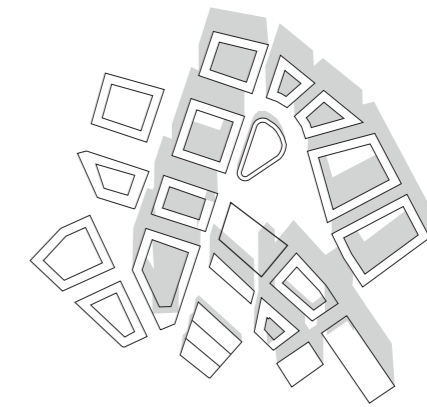
Main traffic flows



Light study 17 april



Light study 17 june



Light study 17 october



Sightlines



Green zones



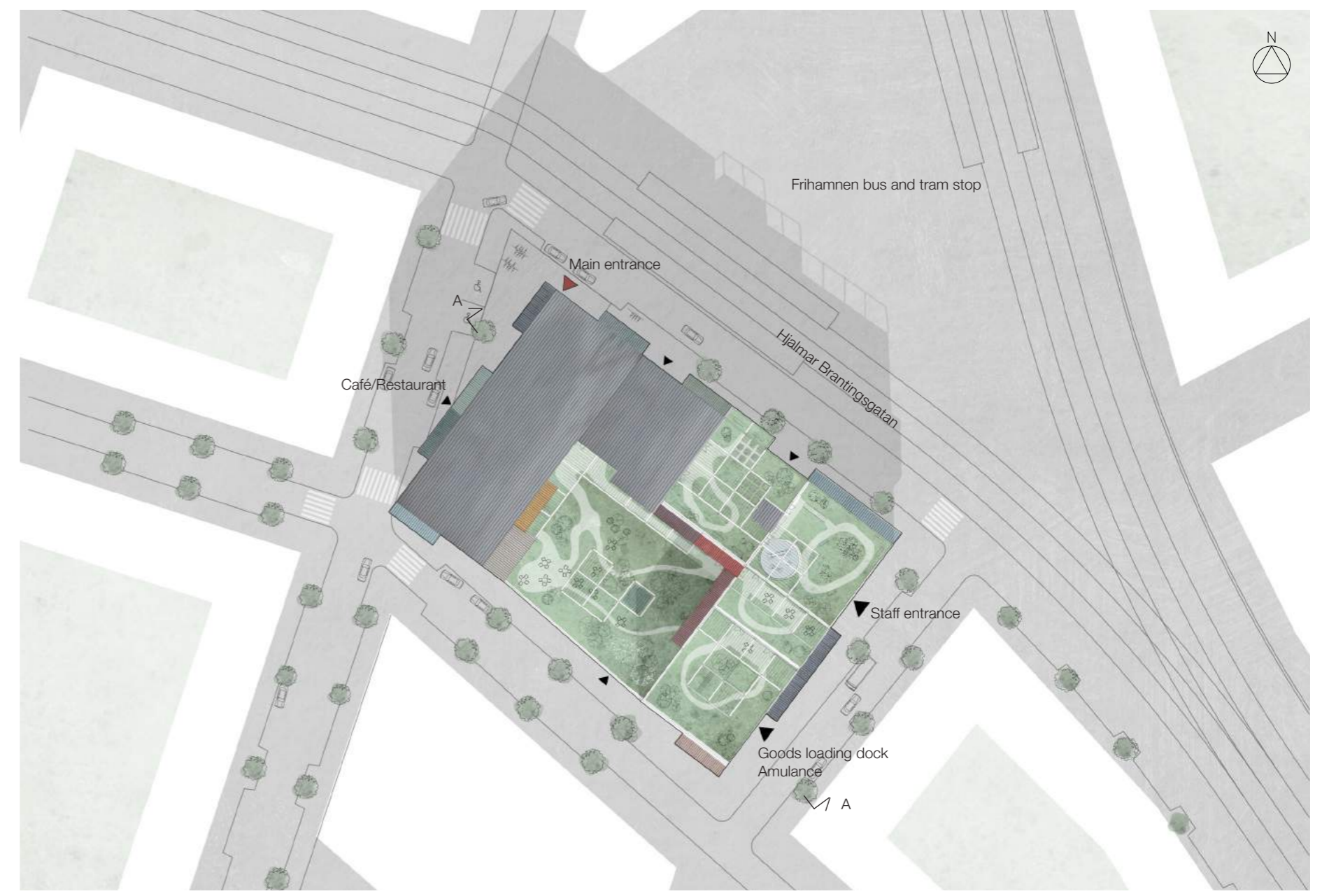
SITE

The main entrance is situated in the northeastern corner. It is easy to spot from the big square where one arrives on public transport. A lot of space is also made in front of the entrance, both for seating and waiting for transportation services and taxis.

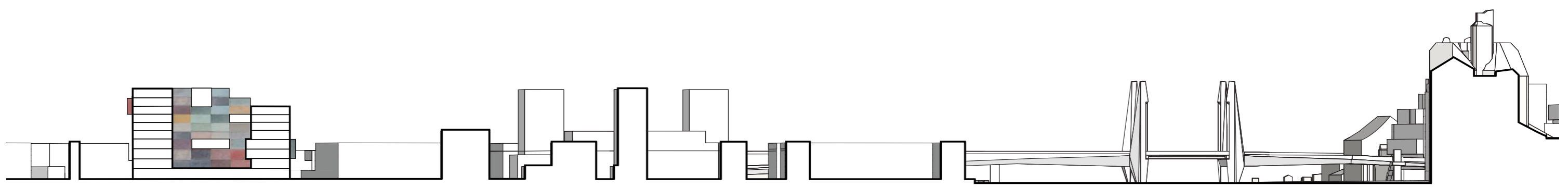
Connecting to the same area is also a restaurant/café open to the public. One can choose to sit on the streetside and watch the bustling life of the city, or to go into the building and enjoy the serene garden and airy spaces.

Entrance for staff and ambulance is located on the more quiet south side, so is the goods loading dock.

Where the streets are busier, shops are leasing the spaces. On the southwestern side you will find an expressgym for people on the go.



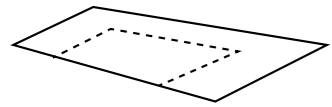
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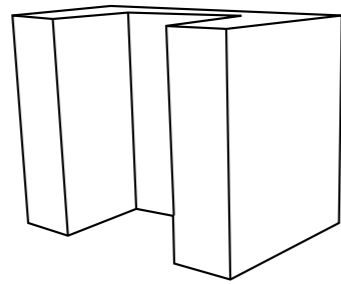
A-A
Harbour Health
Nearby Hospital

Götaälvbron
Läppstiftet
1:2000

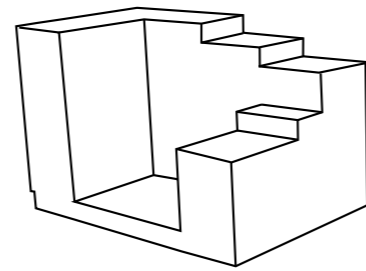
FORM CONCEPT



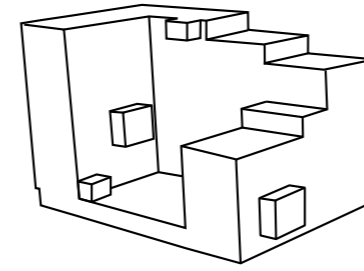
FOOTPRINT
Starting with the footprint of the site.



U-SHAPED
To create a calm courtyard the building takes the form of a u-shape.

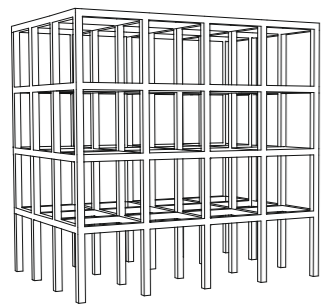


TERRACED
More private green areas is created for those departments where it is extra needed.

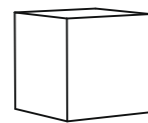


ADAPTABLE
Where the rooms do not fit the grid they push out of the building.

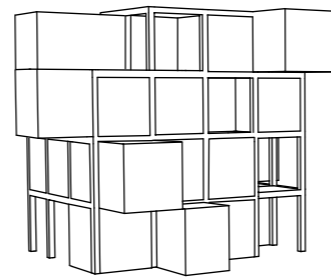
STRUCTURAL CONCEPT



STRUCTURE
The building is based on a constructural grid.

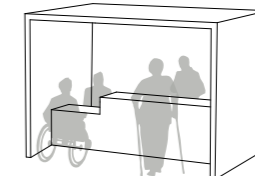


VOLUME
The volume consists of the hospital's functions, cubes that are placed within the grid.

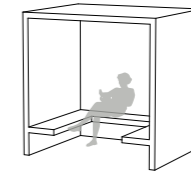


BUILDING
The volumes can then be pushed out, which makes the hospital changeable. Both to better accommodate existing functions and to be able to adapt over time.

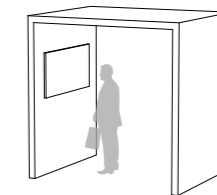
FUNCTIONS OF THE CUBE



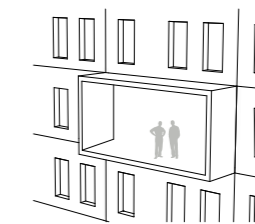
Reception



Private waiting areas



Information and self check-ups



Expandability

COURTYARD & TERRACES



PSYCHIATRY TERRACE

On top of the building, with a fantastic view over Gothenburg's harbour, you find a calm garden for contemplation. Plants are carefully chosen to trig your senses and at the cultivating area for therapeutic activities the patients come close to the greenery. This terrace provides both quiet settings for reflection and embracing spaces for conversations in group.

PHYSIOTHERAPY TERRACE

This active terrace is designed to be used in the patient's treatment process. Variations in ground materials and levels challenge the patient's movement. There is also an outdoor gym that provides tools for workouts on your own, in groups or together with personnel.

STAFF TERRACE

On the 6th floor, where the administration department is located, the staff has easy access to their own terrace. You can go directly from the lunch room to enjoy your coffee and have a chat in the sun.

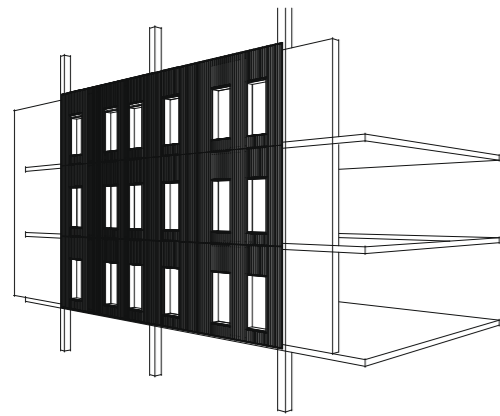
CHILDREN TERRACE

Children and families have the opportunity to wait outside in a green, playful and interactive environment. Here, on the sunny terrace, is space for eating, playing, climbing, running and exploring in green surroundings.

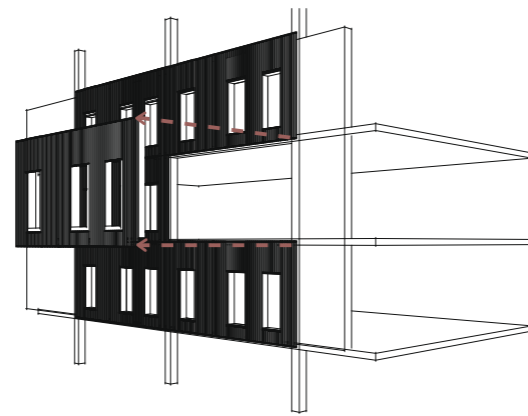
COMMON COURTYARD

The generous and sheltered courtyard is a peaceful garden, shared by patients, visitors, staff and restaurant guests. Surrounded by the hospital, the green area becomes a landmark for people using the building. The close connection to the restaurant and waiting areas invites you to enjoy a cup of coffee amongst the greenery or just to get some fresh air while you are waiting.

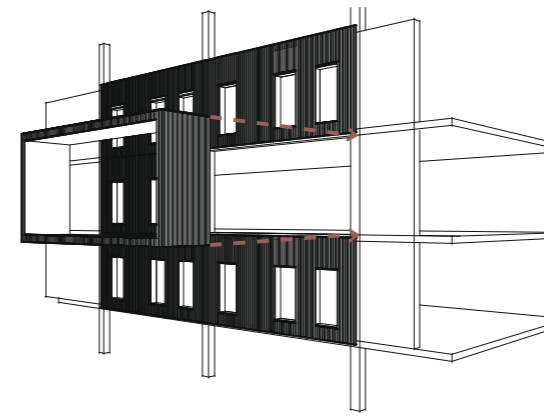
EXPANDABLE CONCEPT



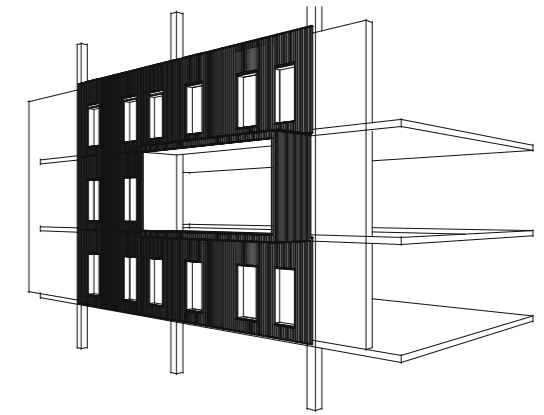
The facade elements on a general wall.



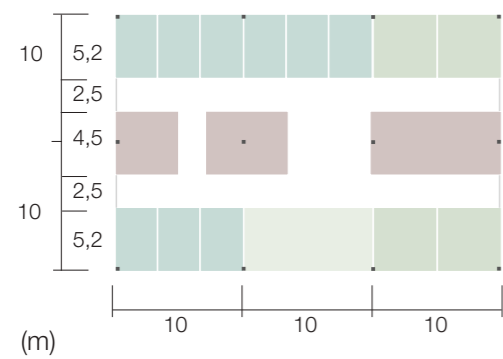
To expand, the elements are removable within the ten metre grid.



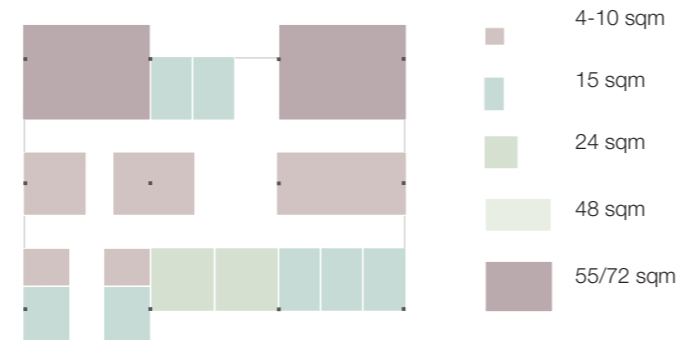
A pre-fab module box is attached on the columns in the facade and reinforced in the slabs.



All boxes stick out 2,5 metres and can be installed where it is needed.



The buildings 10 x 10 m grid makes the rooms and corridors easy to keep general.



The grid allows changes to make rooms bigger and wider, in combination with the module box.



ORGANISATION

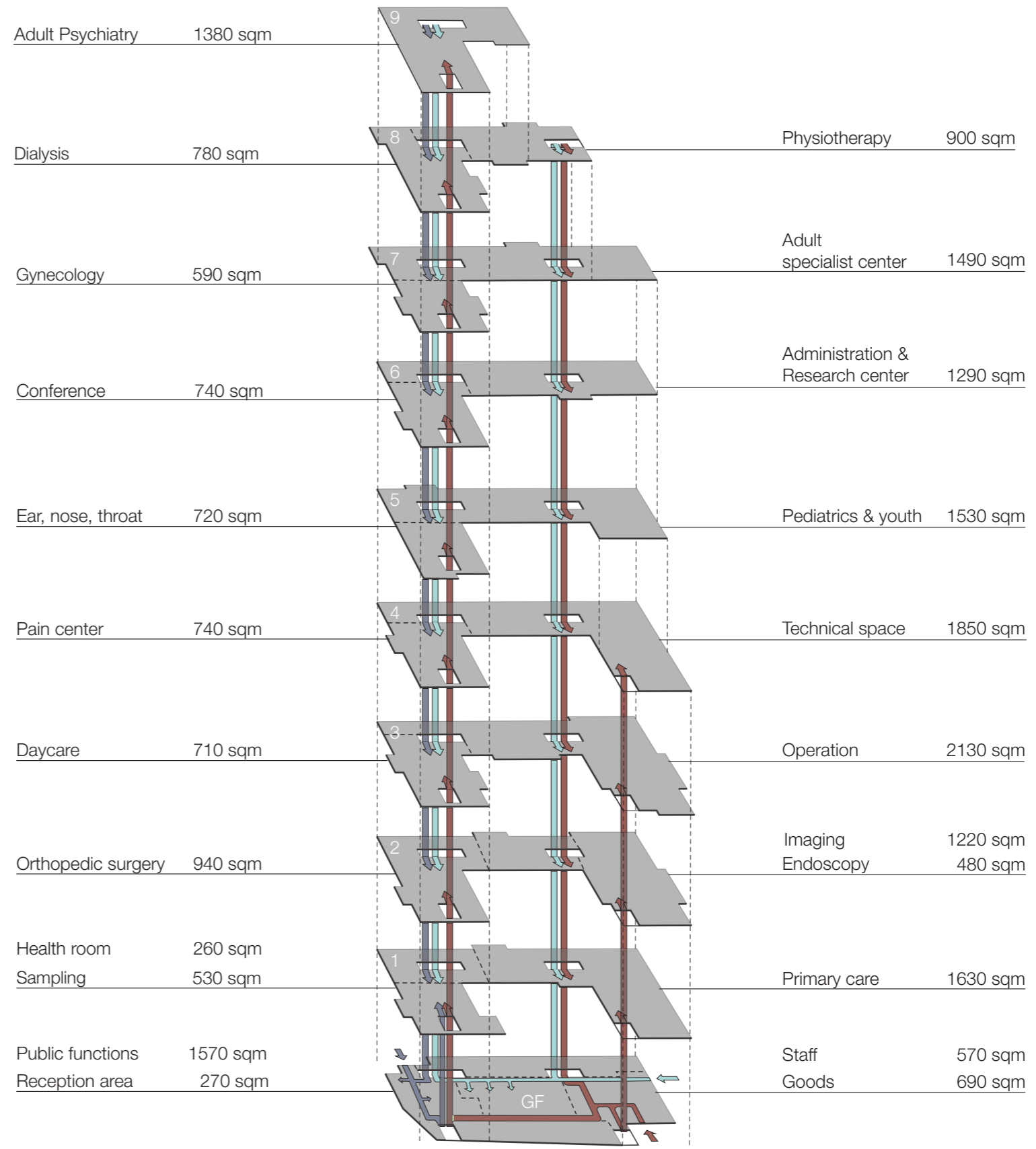
NUMBERS

| | |
|------------------------|------------|
| Hospital | 23 900 sqm |
| Public functions | 1 700 sqm |
| Green areas | 2 600 sqm |
| Gross total area (BTA) | 25 600 sqm |

VERTICAL FLOWS

The different flows all gets distributed horizontally on ground floor. From there on they reach the right departments through separated elevators or stairs.

- Public
- Staff
- Goods



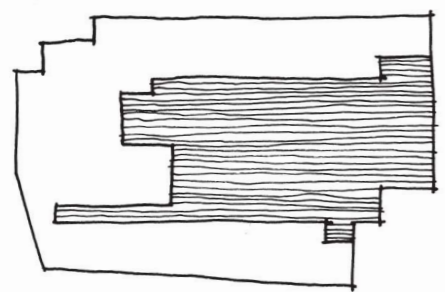
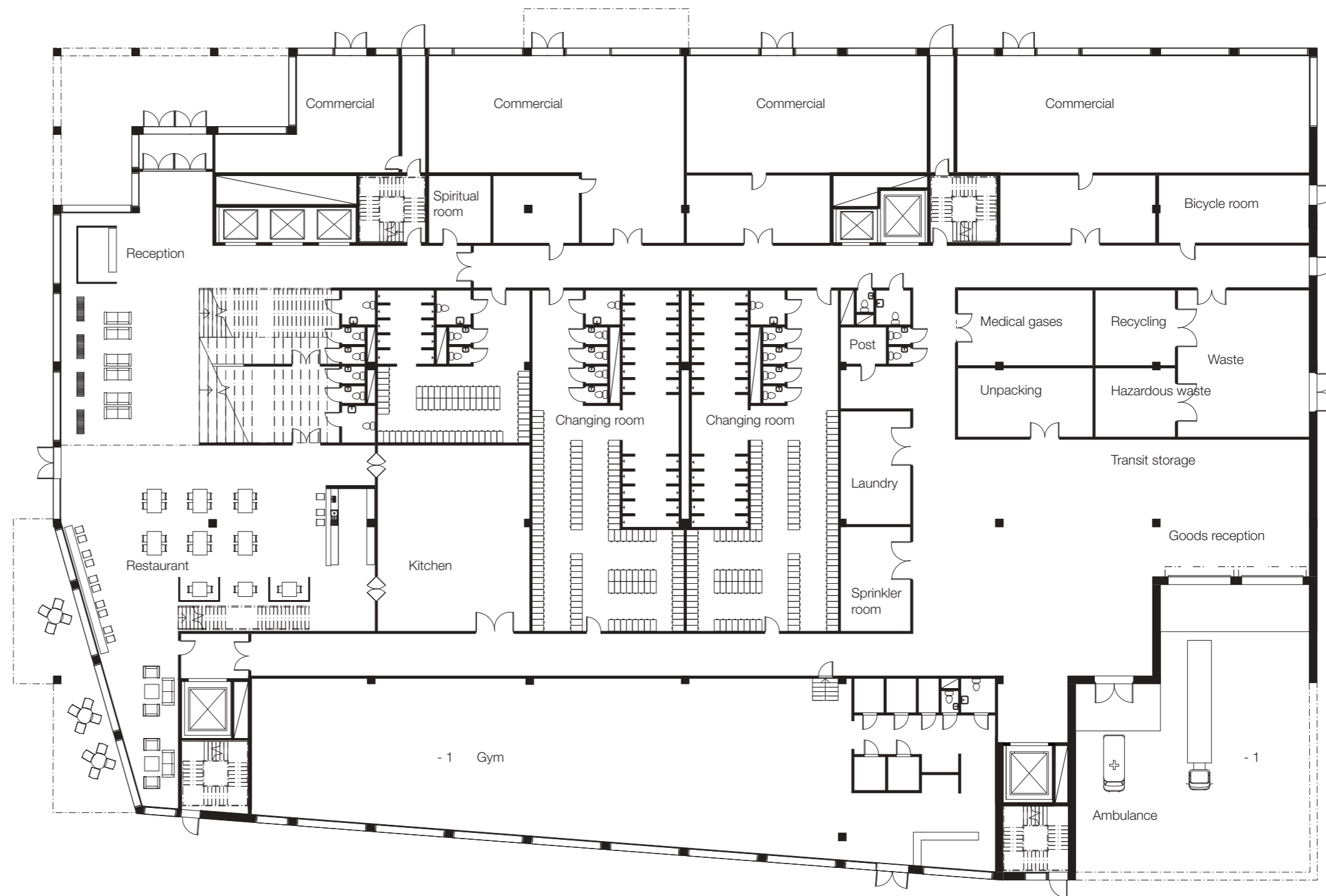
GROUND FLOOR

Most part of the ground floor is open to the public facing the streets. From the main entrance one is welcomed by the reception which will guide you further to the different departments of the hospital. All visitors are referred to use the lift or stairs adjacent to the reception.

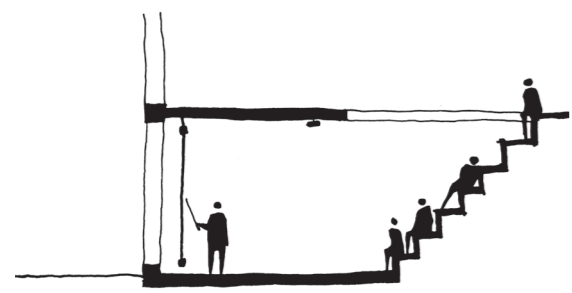
The main hall offers a lounge with a big staircase which also serves as a seating area and can be used for lectures. On this floor, there is also a spiritual room for relaxing and contemplation.

When the hospital is closed, a folding wall divides the hall and the restaurant can be open at off hours.

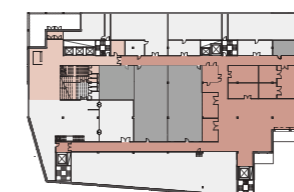
When the goods arrive, it will be distributed to all other areas of the hospital through this floor. Therefore, this floor takes up the entire footprint of the site to enable easy logistics.



PUBLIC/PRIVATE

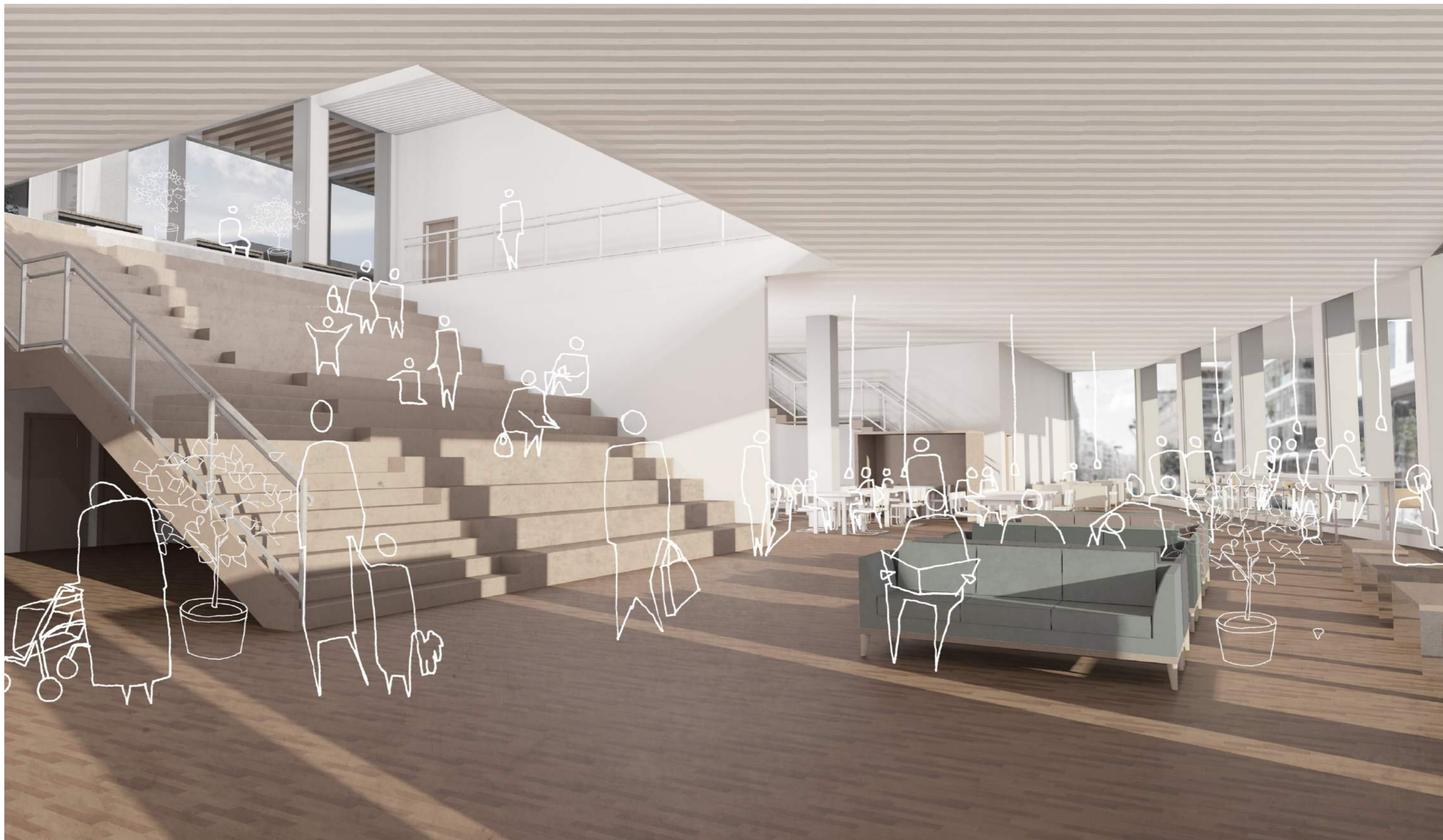


LECTURE



- Goods
- Reception
- Public
- Staff



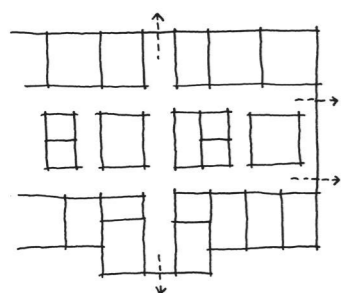


ENTRANCE HALL
Ground floor

FLOOR 1

Both restaurant and main hall staircase leads to the courtyard greenery on floor 1. The courtyard serves as both an area for coffee and contemplation. All waiting areas and receptions are found outside the lifts. There are always big windows facing the garden from the waiting area on each floor.

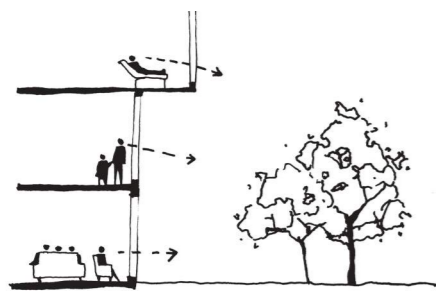
Visitors who want to check their health or leave samples, do so in the health room. Here are DIY check-in cubes, information and reading areas. The spacious room also allows exhibitions on health. Neighbouring departments are sampling and primary care.



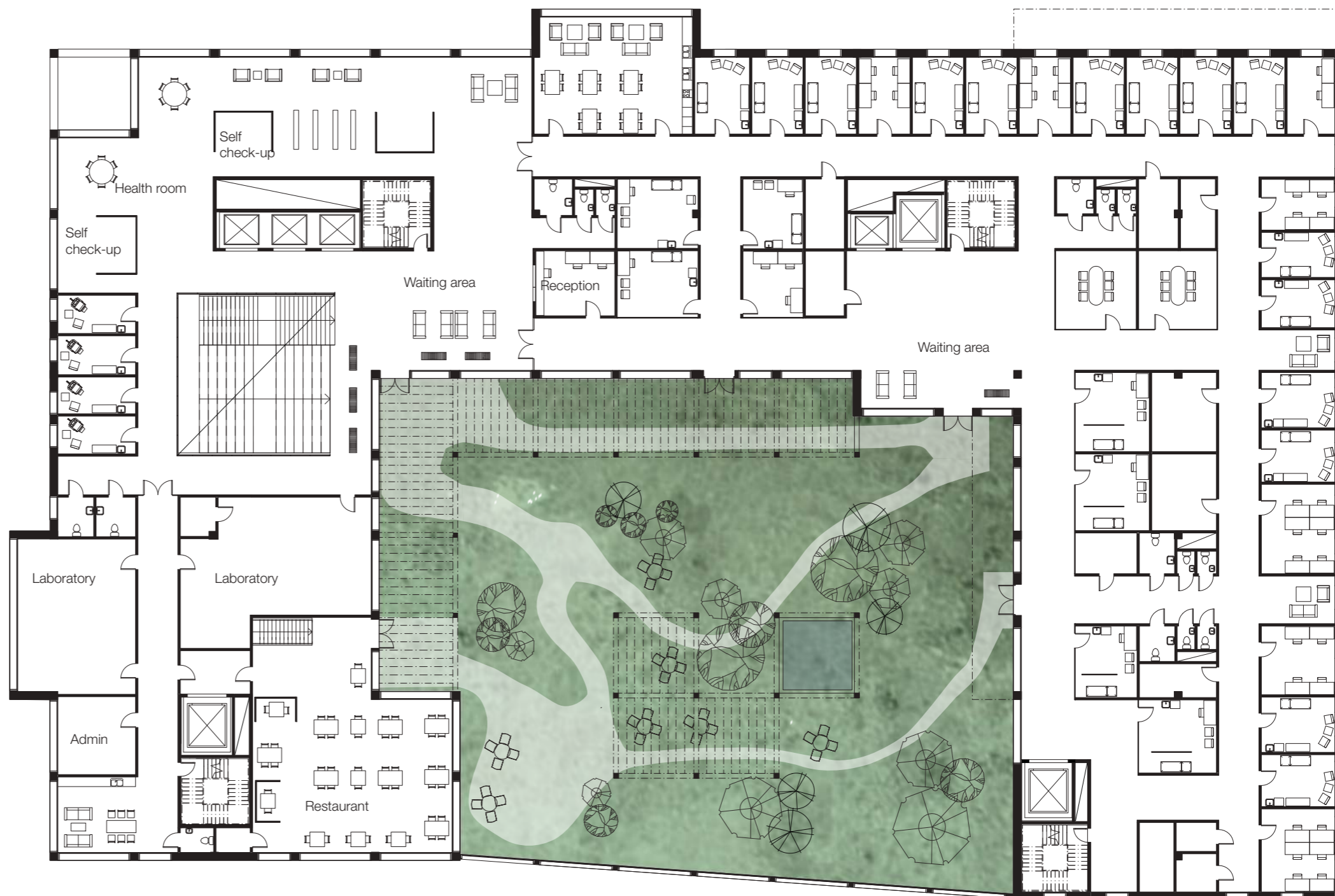
HORIZONTAL LIGHT SHAFTS



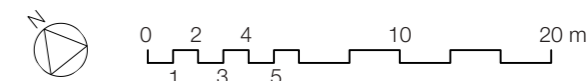
TRANSITION ZONES



COURTYARD CONNECTION



- Health room
- Sampling
- Primary care
- Restaurant
- Waiting area
- Staff break room

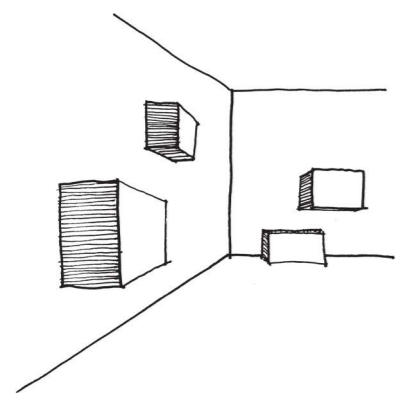




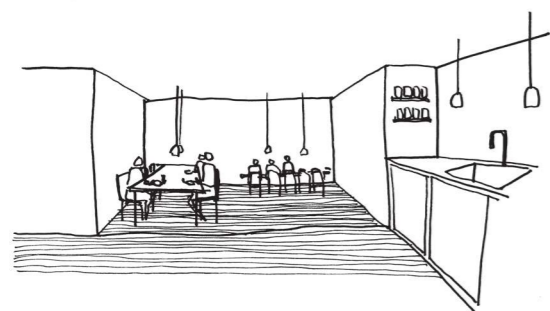
HEALTH ROOM
Floor 1

FLOOR 3

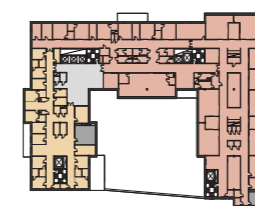
From the shared waiting area, with a smaller reception, the patient is guided to the department for pre and post operation. Further in, in the southern wing, the sterile zone is located. This is where the surgeries take place. After surgery the patient either recover back in the pre and post operation department, or is moved to a single bedroom at daycare. Since the operation theaters and the pre and post operation rooms require much space this floor is expanded on several places. These rooms have also been prioritised for good daylight conditions and a view for positive distraction and faster recovery.



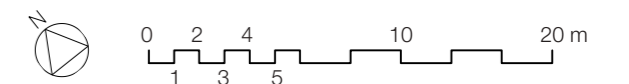
EXPANDABILITY



STAFF ROOM

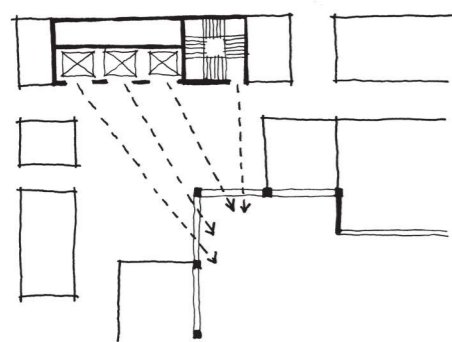


- Daycare
- Operation
- Waiting area
- Staff break room

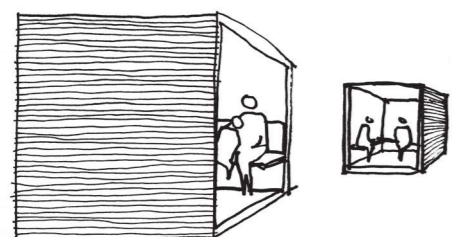


FLOOR 5

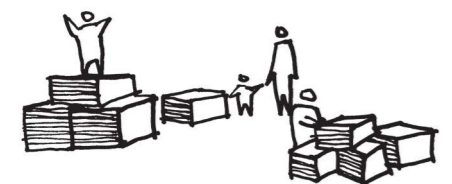
At the pediatrics and youth department the main waiting area is twice as big as at the other departments. As on all floors an administration room with a reception is facing the waiting area. Cubes are placed over the floor and creates quiet, more private rooms or active spaces for play. Visitors can chose to visit the green terrace while they are waiting. Smaller lounge areas with daylight are provided for accompanying family members. To create lighter middle cores and airy corridors the rooms placed in the middle have gaps in between them and when possible glass walls.



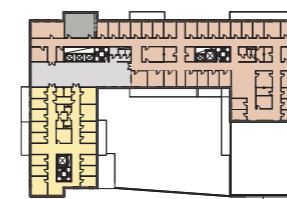
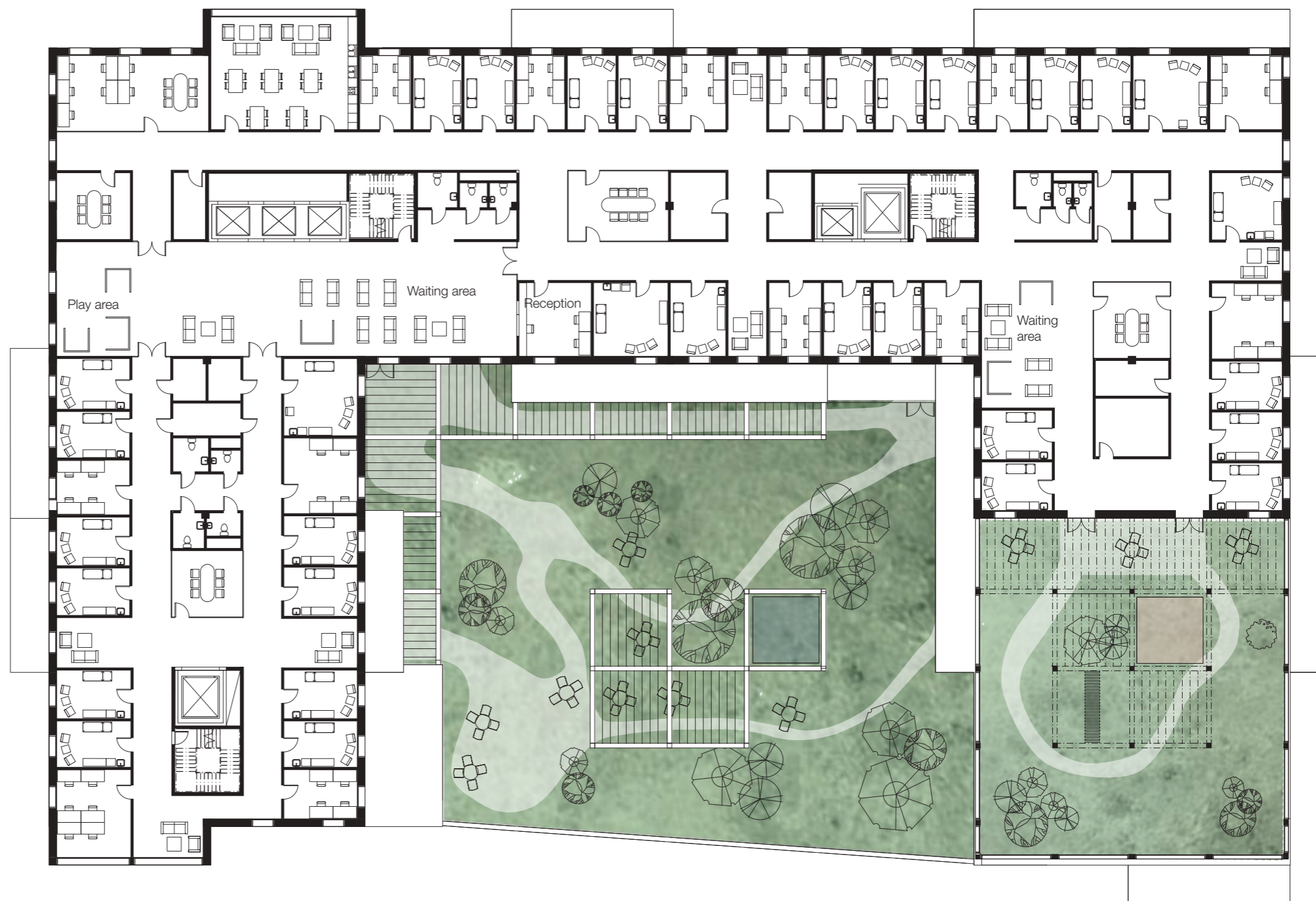
ORIENTATION



PRIVATE ZONES



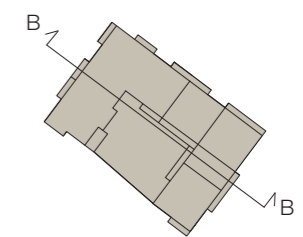
PLAYFUL WAITING AREA



- Pediatrics & youth
- Ear, nose, throat
- Waiting area
- Staff break room



SECTION B-B

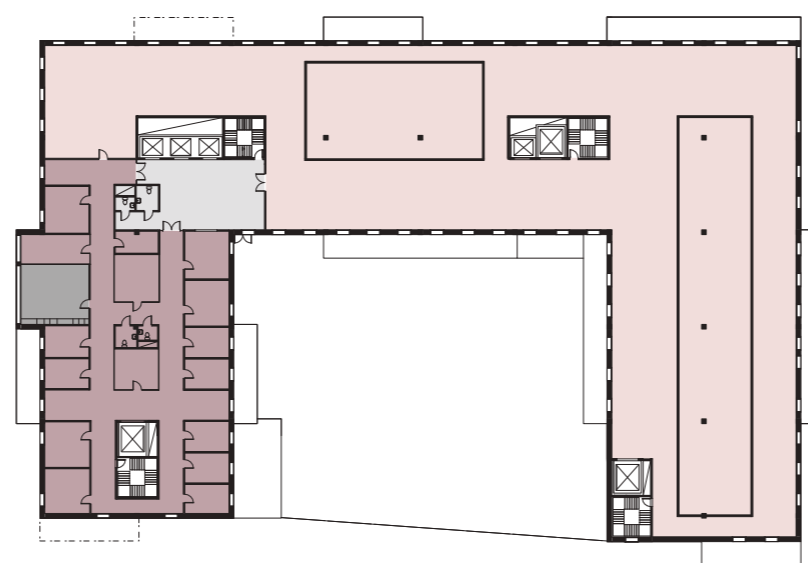


SCALE 1:250

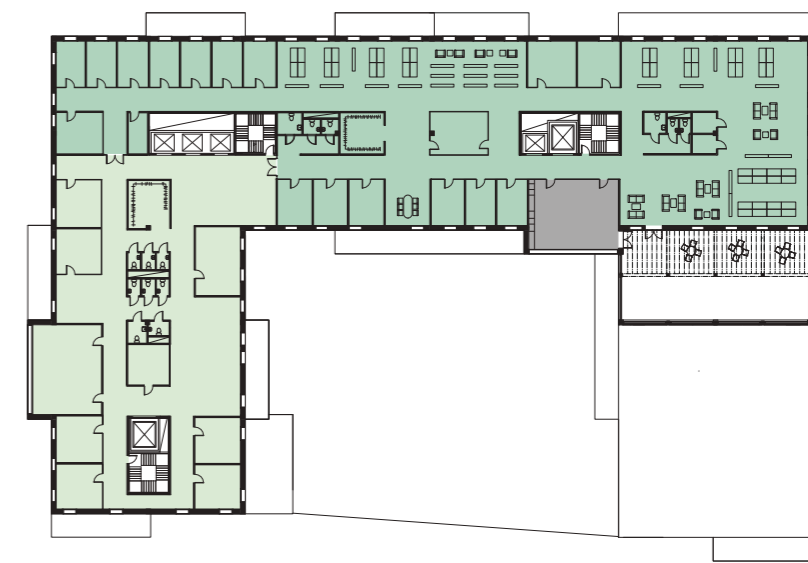
FLOOR 2, 4, 6-9



- 2
- Imaging
 - Orthopedic surgery
 - Endoscopy
 - Waiting area
 - Staff break room



- 4
- Technical space
 - Pain center
 - Waiting area
 - Staff break room



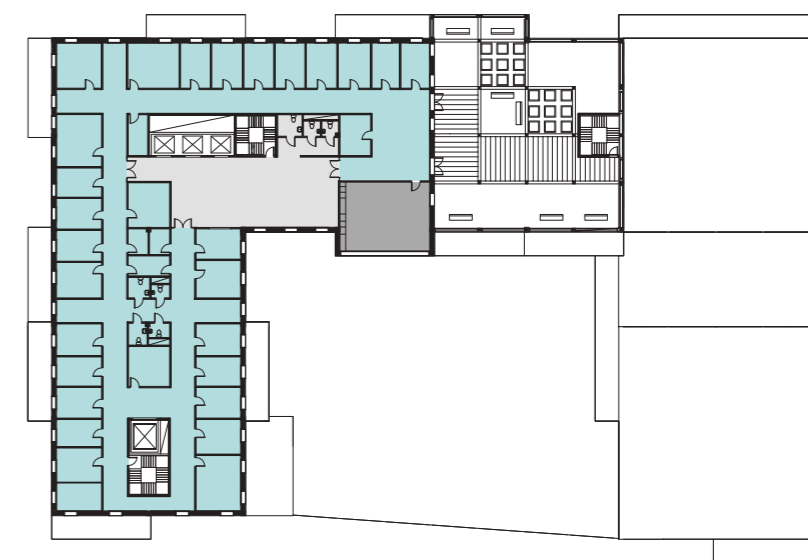
- 6
- Administration
 - Conference
 - Waiting area
 - Staff break room



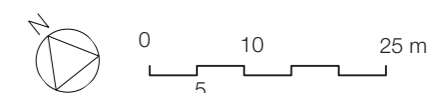
- 7
- Adult specialist centre
 - Gynecology
 - Waiting area
 - Staff break room



- 8
- Dialysis
 - Physiotherapy
 - Waiting area
 - Staff break room



- 9
- Adult Psychiatry
 - Waiting area
 - Staff break room





WAITING AREA
Floor 1