



EMBRACE

Health - People - Context



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INTRODUCTION

The task

The region of Östergötland, is planning a new primary care center, located in Birgitta hospital area in Vadstena, as the current primary care center is not suitable for modern standards.

The brief includes primary care, specialist outpatient clinic, public dental care, a child- and family center within the range of 3000-3500 m². One pre-condition is to preserve and transform one of the two buildings in the plot and respect the municipality's regulations for the area.

The site

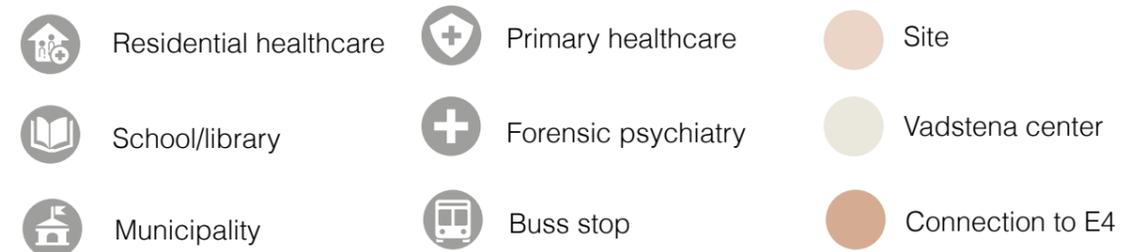
Vadstena is a small town, and the municipality has around 7500 inhabitants. Currently, the population is growing, and the share of elderly is increasing.

The history and local heritage is strongly represented in Vadstena, and has many well-preserved historical buildings, originated as early as from the medieval age. The site, in the previous Birgitta hospital area, is located in a calm area characterized by 2-3 storey "buildings in park", from the 1940-1960's, a short walk from the city center. It includes two heritage buildings from the 1960's, whereas the building facing the Birgitta square must be preserved. Currently, the Birgitta square lacks a program and typical features

Vision and aim

Apart from a proposal of one new health care building that include all the required functions under the same roof, the aim is to re-connect to the history of the area associated with health and care, by transforming the building facing the Birgitta square to an assisted living for elderly.

A clear physical link between the old and new buildings, will include the Birgitta square and strengthen the contextual relationship. The ambition of the proposal is to support social, economic and ecologic sustainability. Both outdoor and indoor environment is based on by both evidence-based design and other research.



DESIGN STRATEGIES

This project is based on a few design strategies to strengthen the design and concept of the building. The design strategies are divided into four categories:

- Sustainability and future proofing
- Evidence based design and health promotion
- Site and context
- Brief and logistic

We wanted to create an welcoming and warm healthcare environment that is well connected to the nature, site and its context.

To prepare the building for future changes or and challenges we decided to design a flexible wooden construction with a standard grid that allows the rooms to easily grow or shrink in size over time. The separate corridors and flows of people allows the healthcare center to operate safely during future pandemics or outbreak of disease.



E-HEALTH SUPPORT
Rooms for physical support for using online services for both patients and staff.



OUTDOOR WAITING
Weather protected outdoor waiting spaces for patients.



HISTORICAL MATERIALS
Reinterpretation of historical architectural features and materials.



STANDARD GRID
Use of rooms can easily be changed for another use without transformations.



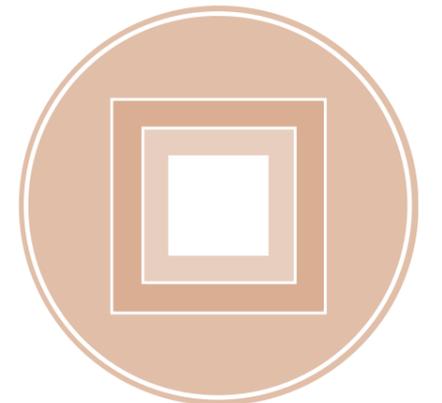
WOOD CONSTRUCTION
Sustainable building materials that permits flexibility and are locally sourced.



VIEWS OF NATURE
Views of nature for both the patients and the staff.



ACTIVATE SQUARE
Public function and healthcare in the buildings around the square.



SEPARATE FLOWS
Separating public and staff flows via separate corridors and zones.



INCREASE BIODIVERSITY
Revitalize the green space and create a new area for biodiversity.



CALM ENVIRONMENTS
Natural and high quality materials to improve the atmosphere.

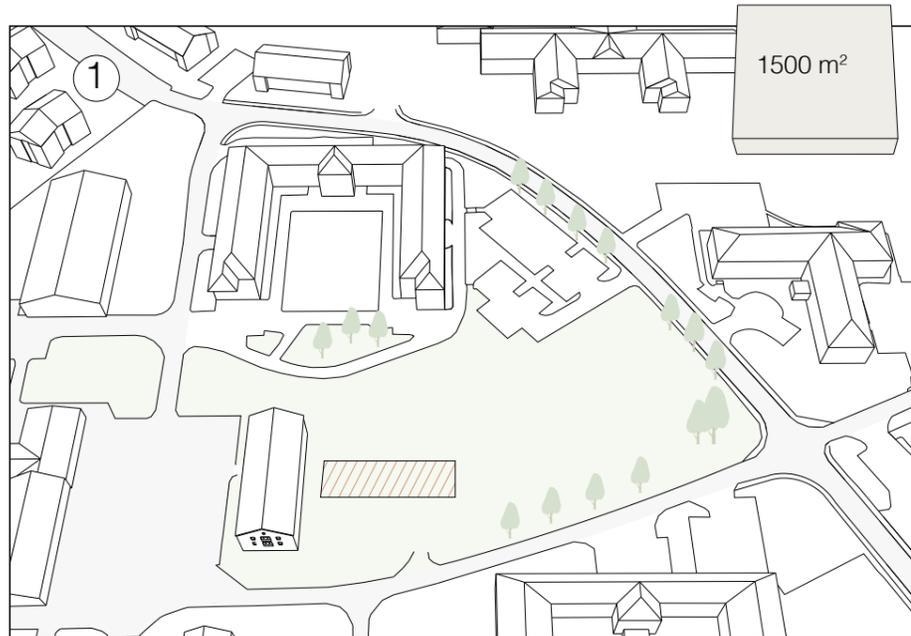


SOCIAL CONNECTION
Strengthen the identity and social connection with new functions.

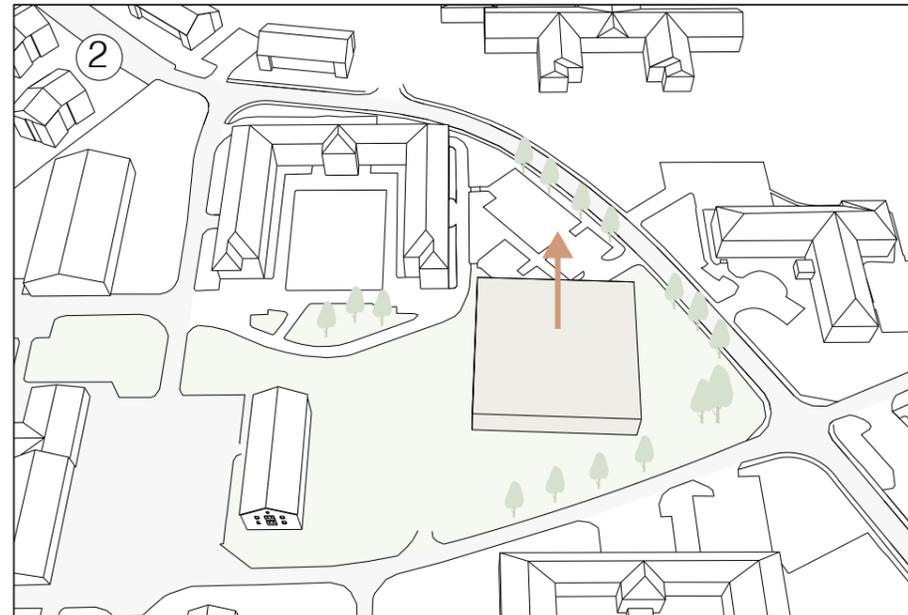


TEAM-BASED WORK
Team promotive rooms with option of temporary individual space.

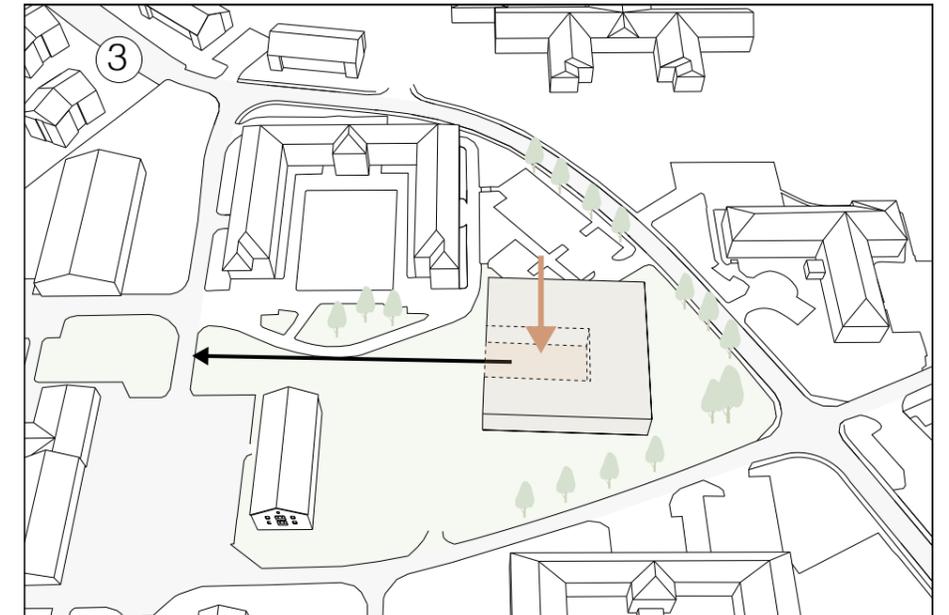
BUILDING CONCEPT



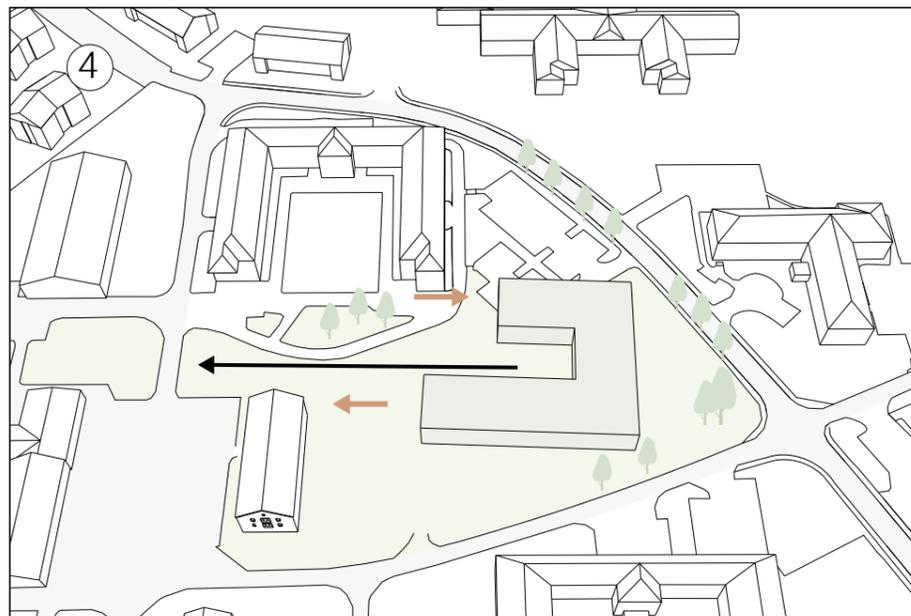
Pull down the existing building and re-develop a new healthcare center to support future demands. The second building is to be transformed to assisted living for elderly.



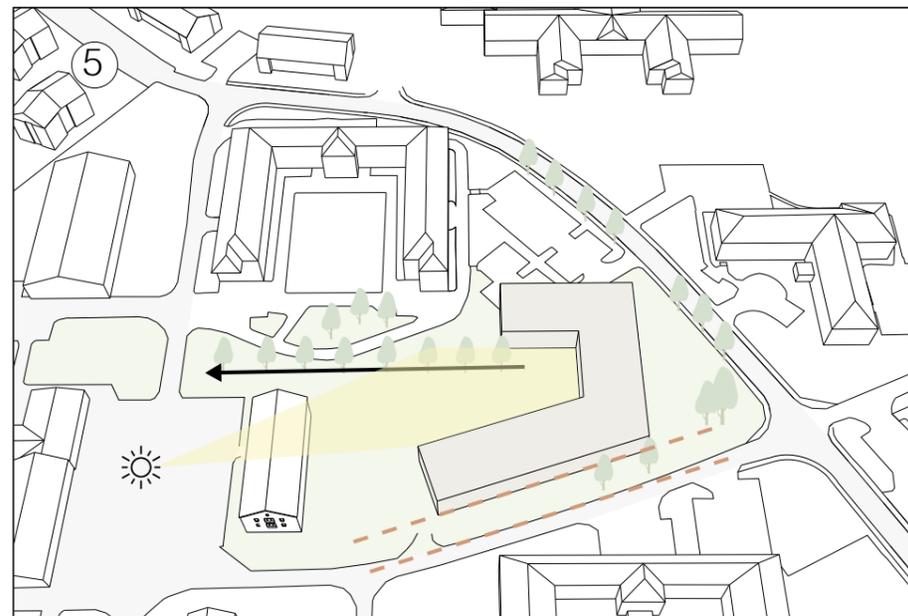
Develop new 2-storey building of max 3500 m² in the plot.



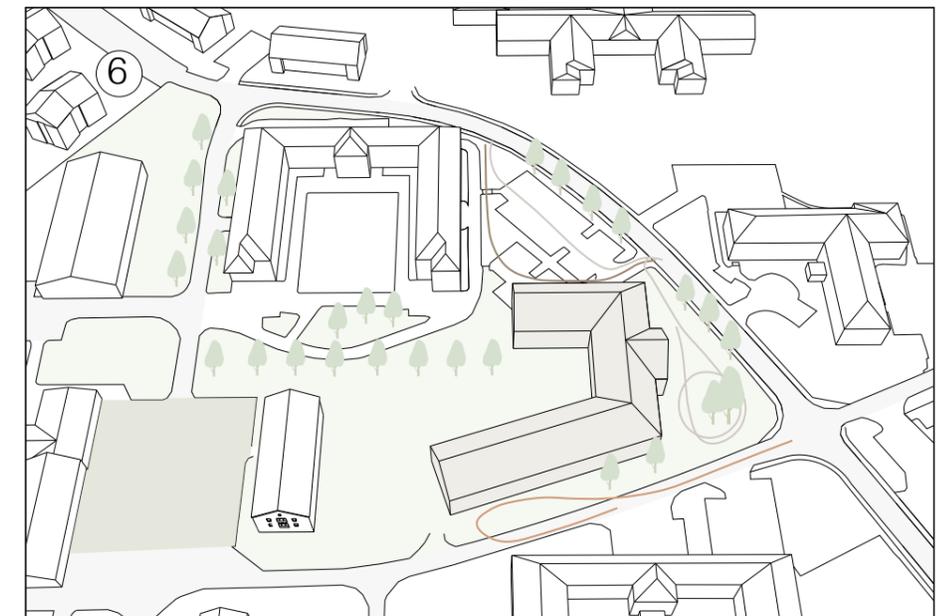
Reinterpretation of surrounding U-shaped buildings



Adjust the length of the building to fit the plot and brief. Capture important sightline.



Adapt to the surrounding building rules and patterns. Improve sun conditions and frame the outdoor space.



Accentuate the main entrance, reinterpretation of surrounding features. Create separated flows for different functions.

LANDSCAPING



Biodiversity



Shared zone



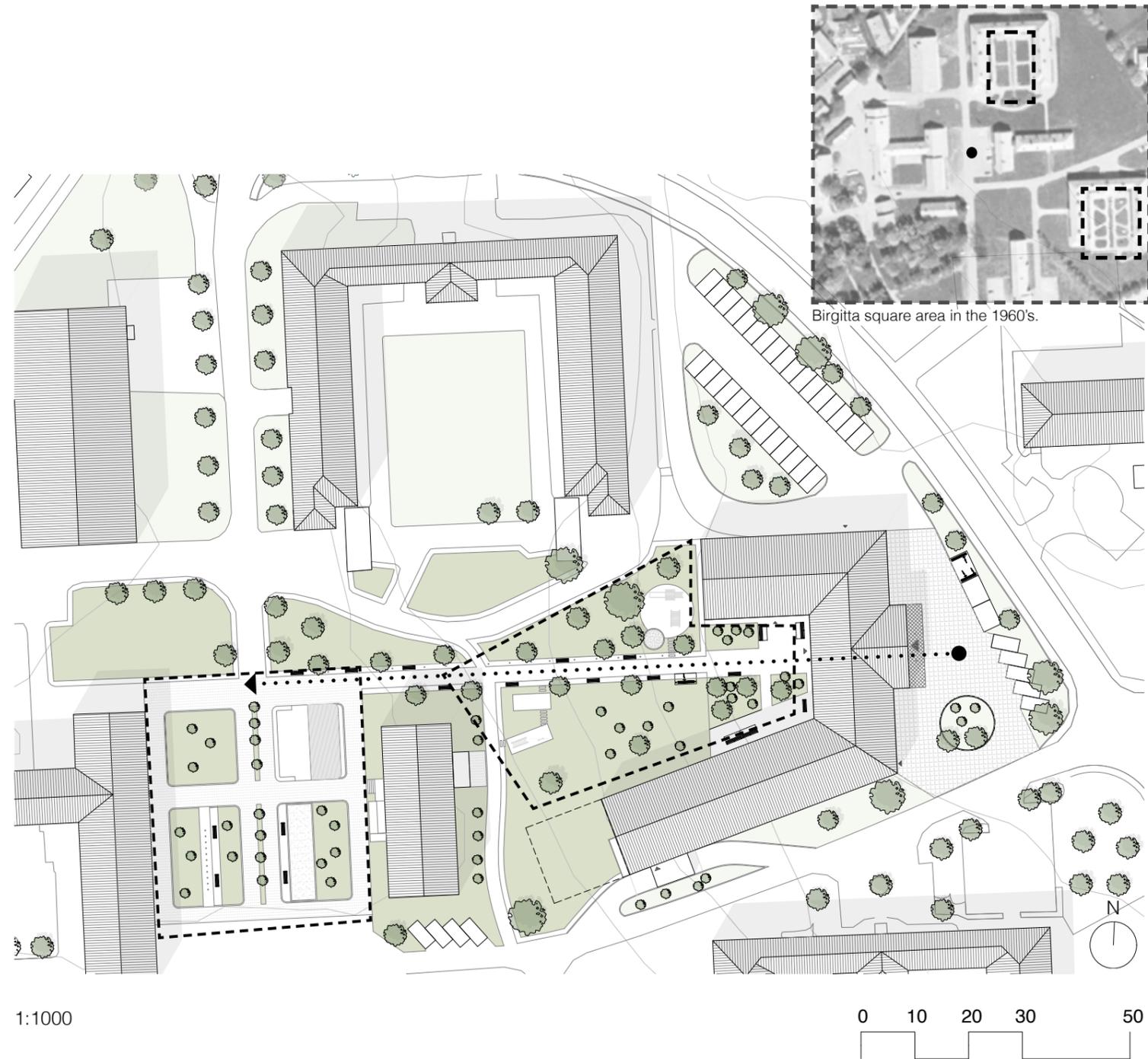
Sundeck / stage



Water rill



Boule court



1:1000

0 10 20 30 50



Sensory garden



Benches



Outdoor gym



Playground



Outdoor waiting area

A walkway through the courtyard strengthens the connection between the main entrance in east, with the Birgitta square in west. Some parts in the outdoor area are inspired by the original courtyards in the psychiatric hospital buildings from 1948-1961, that unfortunately were replaced by uniform grass lawns.

To increase the biodiversity in the area, different kind of trees, plants and flowers that are gentle for people with allergies, are added. Various zones with sensory gardens in the yard

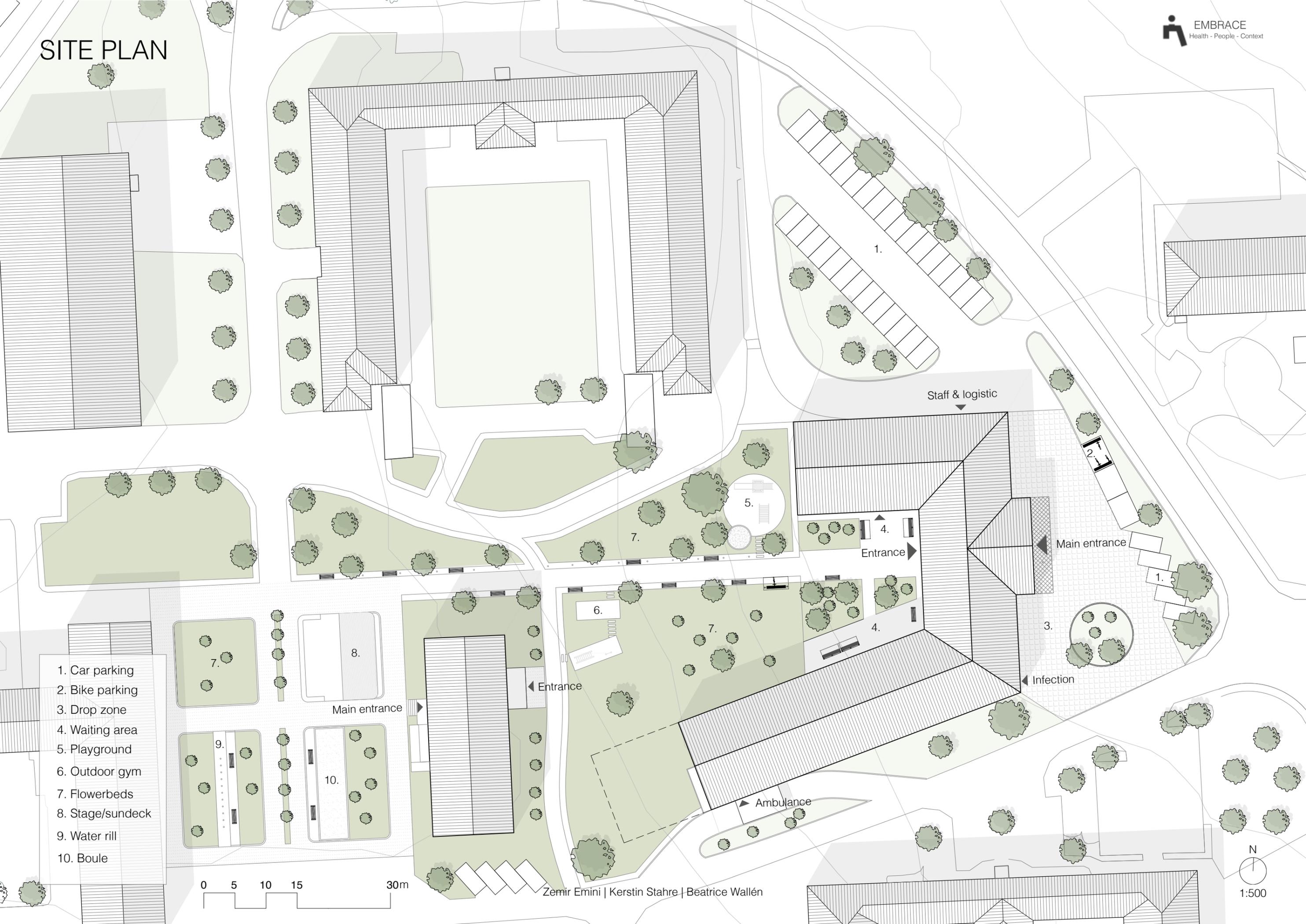
will provide different experiences that is supporting visitor's wellbeing and healing.

The square is transformed to a low-speed shared zone with possibility of drop-off for cars close to the entrances. This area will facilitate social connections between different age groups. A large wooden sun deck with dual purpose can occasionally be used as a stage for the nearby cultural school. A court for playing boules, smaller water rill, plants, flowers, and benches

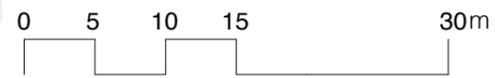
offer both activity and places for rest.

The indoor physiotherapists can choose to accommodate the exercise at the outdoor gym in the yard, that naturally also is available for all citizens. Close to the family- and childcare center, a playground is situated. A weather protected outdoor waiting area in the yard, with direct access to the primary care indoor waiting area, give the patients the option to spend time in the nature, while waiting.

SITE PLAN



1. Car parking
2. Bike parking
3. Drop zone
4. Waiting area
5. Playground
6. Outdoor gym
7. Flowerbeds
8. Stage/sundeck
9. Water rill
10. Boule

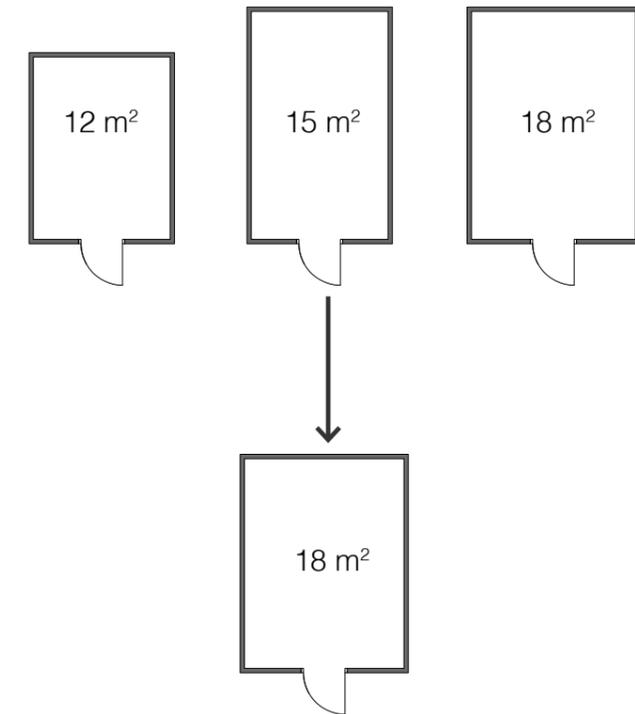
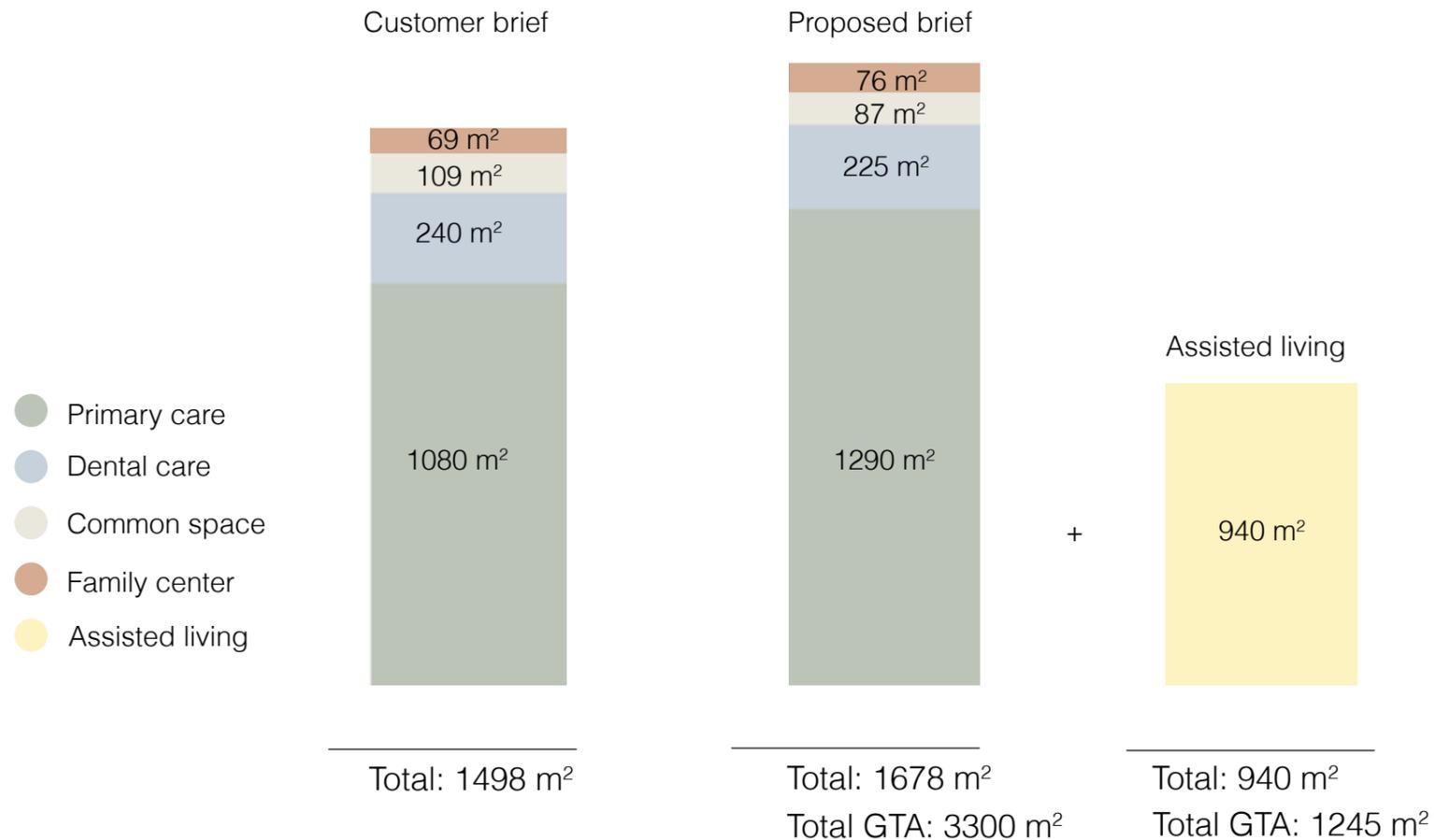


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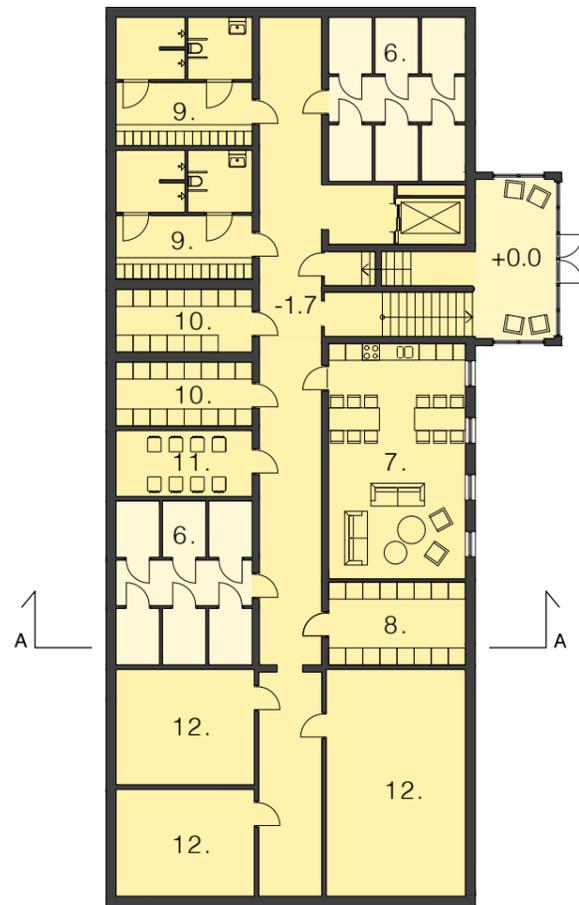
THE BRIEF



The variation in size of the examination rooms of 12-18 m² in the customer's brief, is set to 16 m² and fit multiple functions, giving flexibility for easy rearrangements in the future.

<ul style="list-style-type: none"> Primary care, + 210 m² <table border="0"> <tr><td>Examination room</td><td>- 133 m²</td></tr> <tr><td>Team office & common area</td><td>+ 184 m²</td></tr> <tr><td>Physiotherapy & gym</td><td>+ 123 m²</td></tr> <tr><td>E-health support</td><td>+ 8 m²</td></tr> <tr><td>Health booth</td><td>+ 8 m²</td></tr> <tr><td>WC, interlock room</td><td>+ 20 m²</td></tr> </table>	Examination room	- 133 m ²	Team office & common area	+ 184 m ²	Physiotherapy & gym	+ 123 m ²	E-health support	+ 8 m ²	Health booth	+ 8 m ²	WC, interlock room	+ 20 m ²	<h3>Rearranging the brief</h3> <p>The customer brief, is rearranged to better meet future demands, achieve high utilization rate for the space and become an attractive environment, supporting health for both staff and patients. Due to increased need for physiotherapy, rehabilitation and e-support services, a large gym, self-service health booth, e-health support is added to the brief.</p>	<h3>Offices and examination rooms</h3> <p>Separated team-based administrative offices for all functions in the healthcare center, permit a smaller number of examination rooms and increase the occupancy of the examination's rooms. Team-rooms makes it possible for the healthcare center management to set the best co-arrangement for the staff and is the same time equality- and team promotive. A consequence of implementing the separate administrative offices, is that the family center's area is slightly increased, but prepared for expansion.</p>
Examination room	- 133 m ²													
Team office & common area	+ 184 m ²													
Physiotherapy & gym	+ 123 m ²													
E-health support	+ 8 m ²													
Health booth	+ 8 m ²													
WC, interlock room	+ 20 m ²													
<ul style="list-style-type: none"> Dental care, - 15 m² <table border="0"> <tr><td>Examination room</td><td>-15 m²</td></tr> </table>	Examination room	-15 m ²	<h3>Assisted living for elderly</h3> <p>The existing building is gently transformed to an assisted living for elderly, which connects to the area's historical context of buildings associated with healthcare. To develop assisted living for elderly is in line with an increasing need for elderly care due to an expected growth of elderly of Vadstena's population. The assisted living's closeness to the healthcare center's facilities is adding value to the assisted living's residents.</p>	<h3>Attractive and healthy workspace</h3> <p>Common staff rooms for all functions in high quality is created for social encounters and recovery and compensates for common office space and add to the aim of creating attractive and healthy workplace.</p>										
Examination room	-15 m ²													
<ul style="list-style-type: none"> Common space, - 22 m² <table border="0"> <tr><td>Re-distribution storage area</td><td>- 22 m²</td></tr> </table>	Re-distribution storage area	- 22 m ²												
Re-distribution storage area	- 22 m ²													
<ul style="list-style-type: none"> Family center, +7 m² <table border="0"> <tr><td>Team office & common area</td><td>+ 7 m²</td></tr> </table>	Team office & common area	+ 7 m ²												
Team office & common area	+ 7 m ²													

ASSISTED LIVING



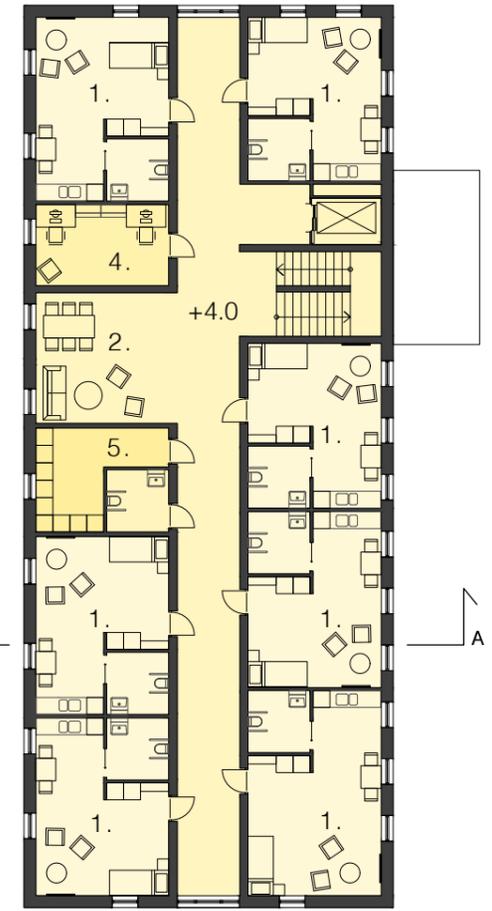
FLOOR -1

Assisted living for elderly including 12 one-room apartments with kitchenette, access to common space and individual storage.



FLOOR 1

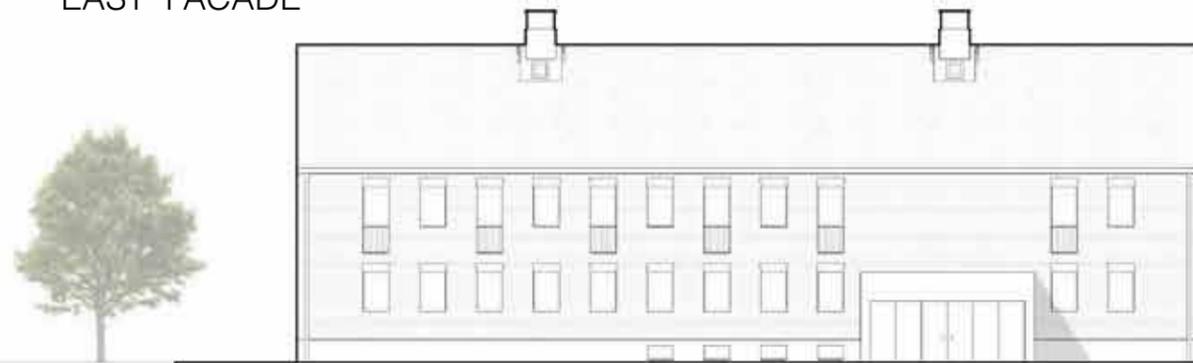
1. Apartment
2. Common room
3. Disinfection
4. Administration
5. Cleaning
6. Storage tenants
7. Staff room
8. Medicine storage
9. Changing room
10. Storage
11. Recycle/waste
12. Technical room



FLOOR 2

- Assisted Living | Staff
- Assisted Living | Mixed
- Assisted Living | Patients

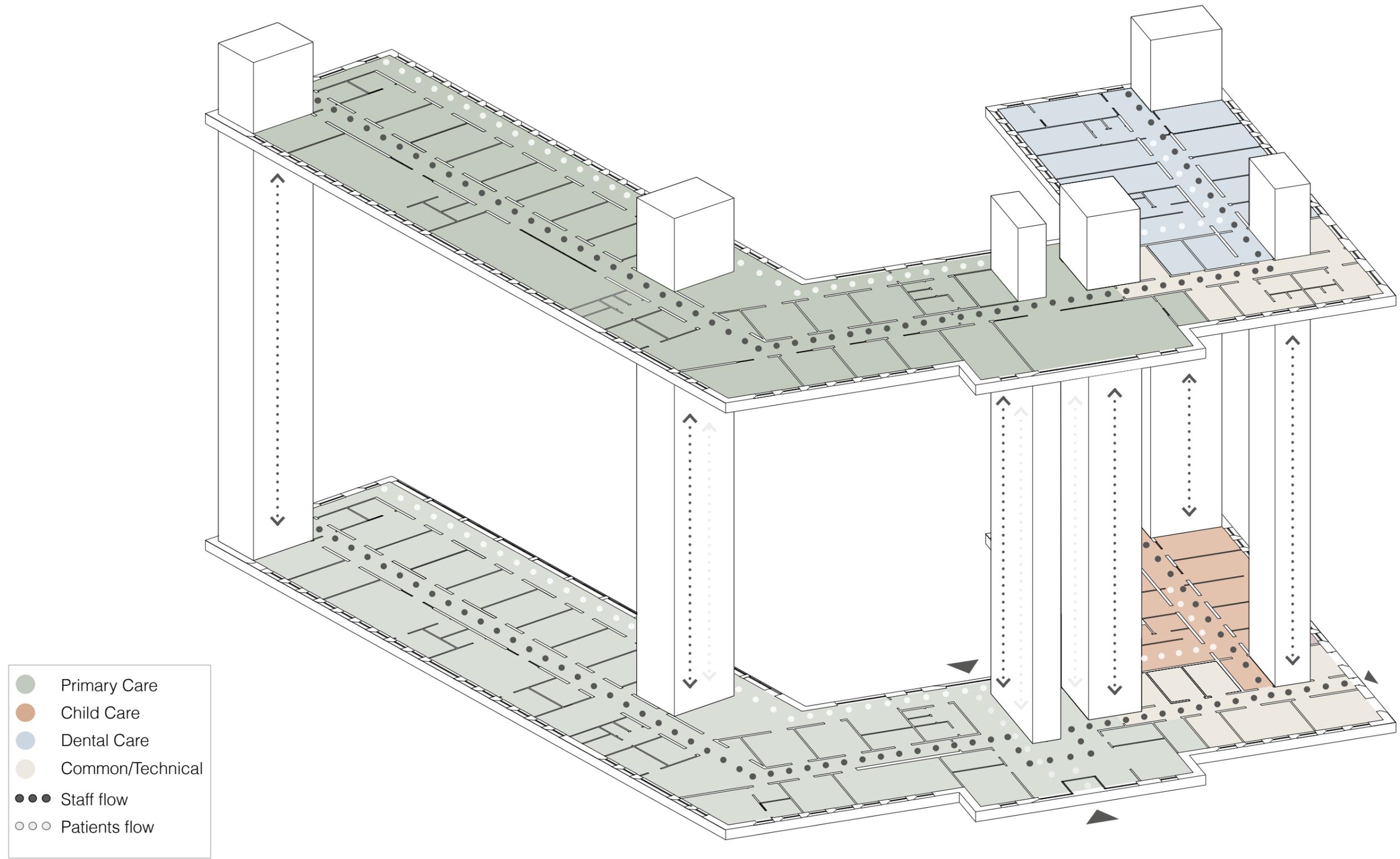
EAST FACADE



SECTION A - A



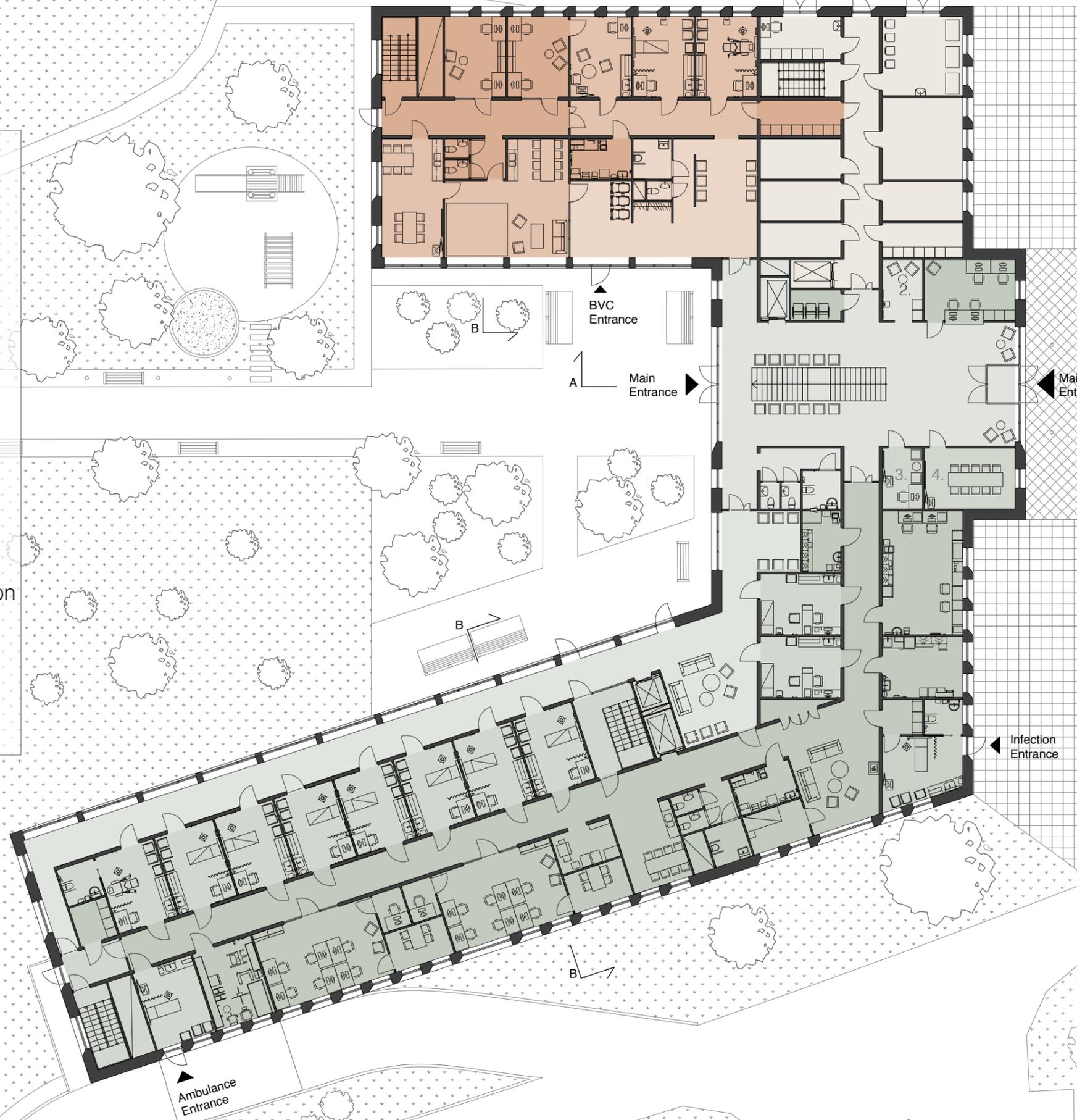
PRIMARY CARE CENTER



FLOOR PLAN

FLOOR 1

1. Reception
2. Health booth
3. E-health support
4. Conference room
5. Waiting room
6. Sampling room
7. Urine laboratory
8. Laboratory
9. Disinfection
10. Examination
11. Staff room
12. Resting room
13. Medicine storage
14. Copy
15. Team office
16. Rolling supplies
17. Storage
18. Gyn/recto examination
19. Stroller storage
20. Activity room
21. Deliveries
22. Recycle / waste
23. Technical room



- Primary Care | Staff
- Primary Care | Mixed
- Primary Care | Patients
- Child Care | Staff
- Child Care | Mixed
- Child Care | Patients
- Common/Technical



FLOOR PLAN

FLOOR 2

- 1. Reception
- 4. Conference room
- 5. Waiting room
- 9. Disinfection
- 10. Examination room
- 11. Staff room
- 13. Medicine storage
- 14. Copy
- 15. Team office
- 17. Storage
- 18. Gyn/recto examination
- 23. Technical room
- 24. Physiotherapy / gym
- 25. Examination dentistry
- 26. Supply
- 27. Technology dentistry
- 28. Cleaning
- 29. Changing room



- Primary Care | Staff
- Primary Care | Mixed
- Primary Care | Patients
- Dentist | Staff
- Dentist | Mixed
- Dentist | Patients
- Common/Technical

SEPARATED FLOW CONCEPT

Floor material



Limestone



Linoleum



Linoleum



"Bolon" carpet

Wall material and colours



Birch panels



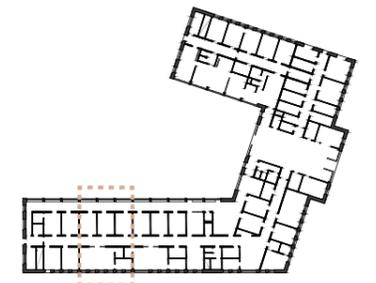
NCS S 0502-Y



NCS S 2002-Y50R



NCS S 2020-R80B



The primary care's "double-corridor system" separates the patient and staff flow. The examination rooms, fully equipped for patient examination and a computer workstation, are reached from two sides, the patient's corridor, and the staff's corridor. Separate administrative team-offices for doctors and nurses with small conference rooms and phone-booths, facilitate the possibility to share examination rooms between staff and increase the examination room's occupancy.

Different materials, textures, and colours, in the different zones, support orientability for visitors and other users. The colour scheme in blue and earth tones, refers to the colour of the nearby lake Vättern and agricultural land.

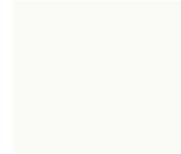
Durable limestone in the patient's corridor from the nearby Borghamn stone quarry, contribute and strengthens the local context.

Linoleum carpets in the examination rooms and staff corridor, is enduring and sustainable, as it can be reconditioned and recycled several times.

A softer carpet of the type "Bolon" made of recycled components, is gentle to walk on and contributes to a good acoustic environment in the team offices.

EXAMINATION ROOM

Materials



NCS S 0502-Y



Birch panels



Linoleum



Ceramic tiles

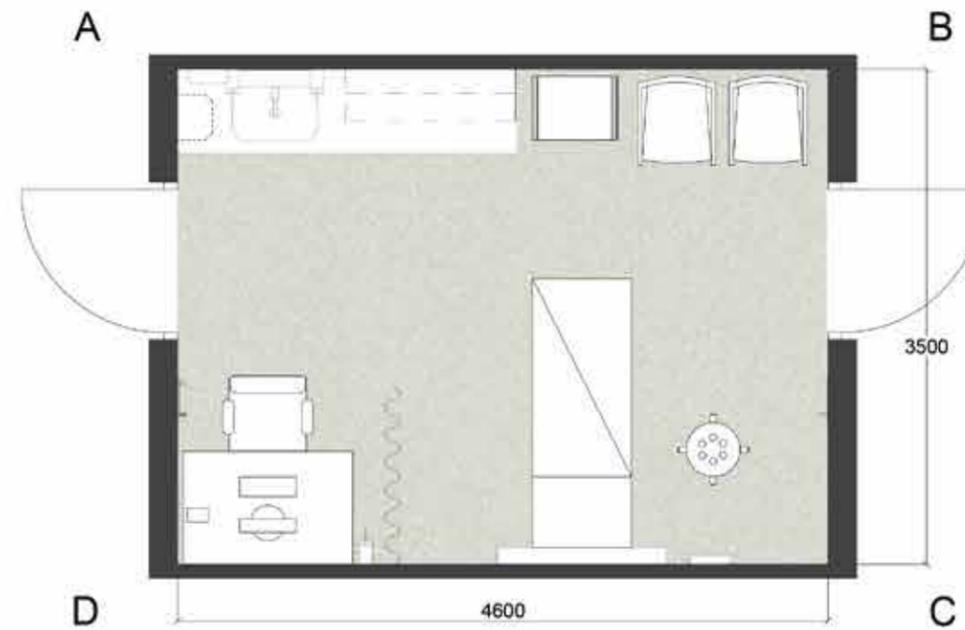


Glass

To create a warm and light atmosphere, birch wood panels, light beige wall color and large transome windows dominates the walls. The built-in cabinets in natural wood, hide and organise frequently used disposable materials, and at the same time adds on to a less institutional character. To meet hygiene requirements and facilitate cleaning, the floor is covered with linoleum carpet in a terrazzo pattern and the built-in cabinets has backsplash in ceramic tiles.



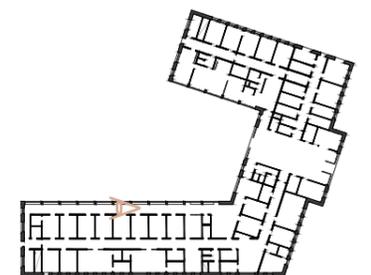
A - B



CORRIDOR



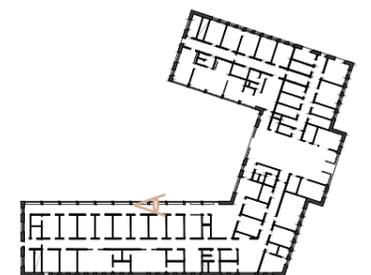
Large windows from floor to ceiling in the patient's corridor, emphasize the closeness to the outdoor green yard and provide daylight to the examination rooms through the transom windows.



CORRIDOR



Along the whole corridor, wooden benches are incorporated between the pillars and windows, which invite patients to sit down and enjoy the views of the yard.



ENTRANCE



Entering the main entrance to the primary care center, the visitors are greeted by an inviting wooden staircase. There is a direct sightline through the building, towards the yard and

the path that leads to the Birgitta square. The lobby include a reception, waiting area, self-testing booth, E-health support, shared conference room, restrooms, and wheelchair storage.

STRUCTURAL PLAN

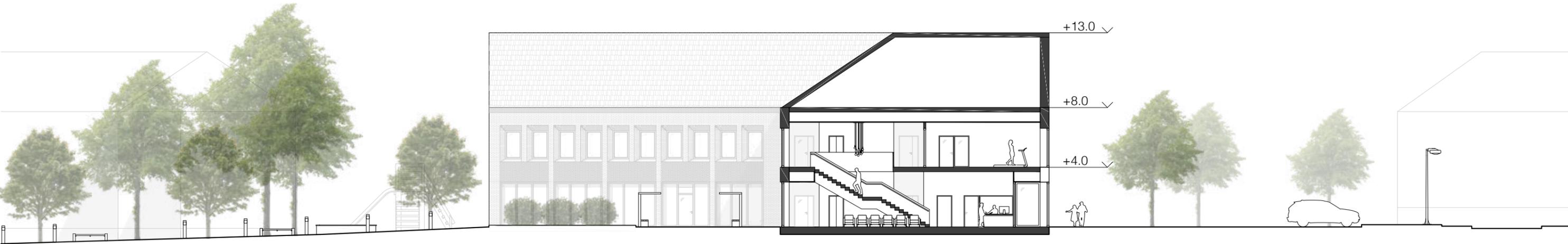
The building structure is divided into a standard-sized grid that is applied to a large part of the whole building.
A system with wooden pillars and CLT slabs were chosen for the load bearing parts of the building, a choice that results in less carbon footprint in comparison with for example a steel and concrete structure.

Pillars have been used to connect the vertical forces in order to ensure greater flexibility and future proof the building.

The enclosures of the stairs are made by CLT walls, necessary to stabilize the structure to the horizontal forces applied to it.



SECTIONS

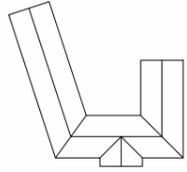


SECTION A - A

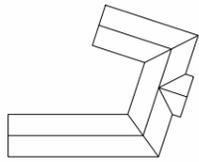


SECTION B - B

EAST

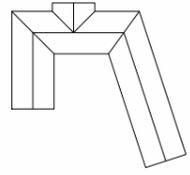


SOUTH

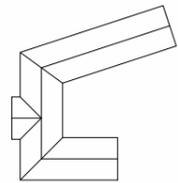


FACADES

WEST



NORTH



DETAILED FACADE AND CONSTRUCTION DETAILS



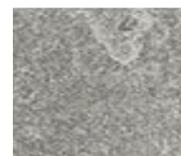
Ceramic roof tile



Brick



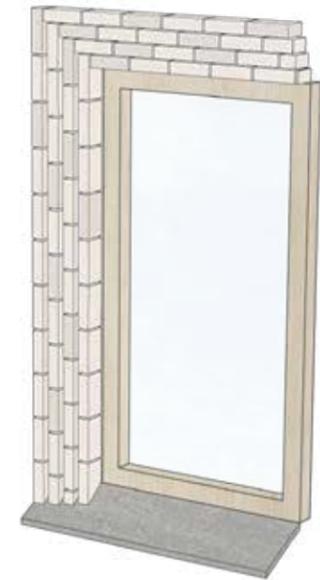
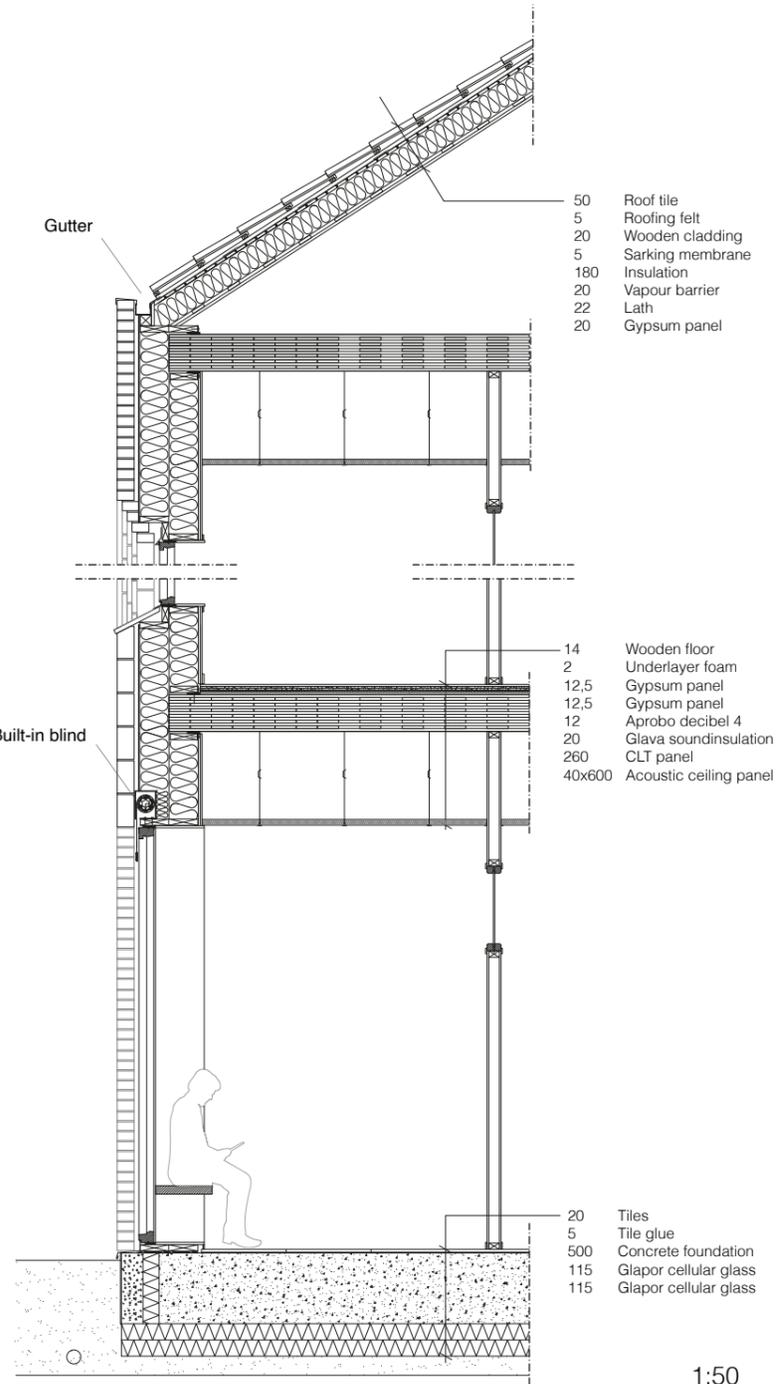
Re-used brick, siltered



Limestone



Oak frames



Detail of window relief

Facade description

The building's features, exterior materials and colours such as brick and ceramic roof tiles are inspired by adjacent surroundings. Large window openings, and the specific pattern in the brick around the window openings, gives the building its own identity and a more contemporary look, when it at the same time speaks with the existing buildings in the area. The design of the window openings improve daylight conditions in the indoor environment. Inspired by the patched and mended medieval buildings in Vadstena, and to support sustainability, the vertical brick pattern below the windows, is made by re-used brick from the old building on the plot. To obtain a more even surface of the re-used brick, this part is thinly siltered. The stone in the window relief, is made of local limestone from the area.

COURTYARD



MAIN ENTRANCE



PHYSICAL MODEL

