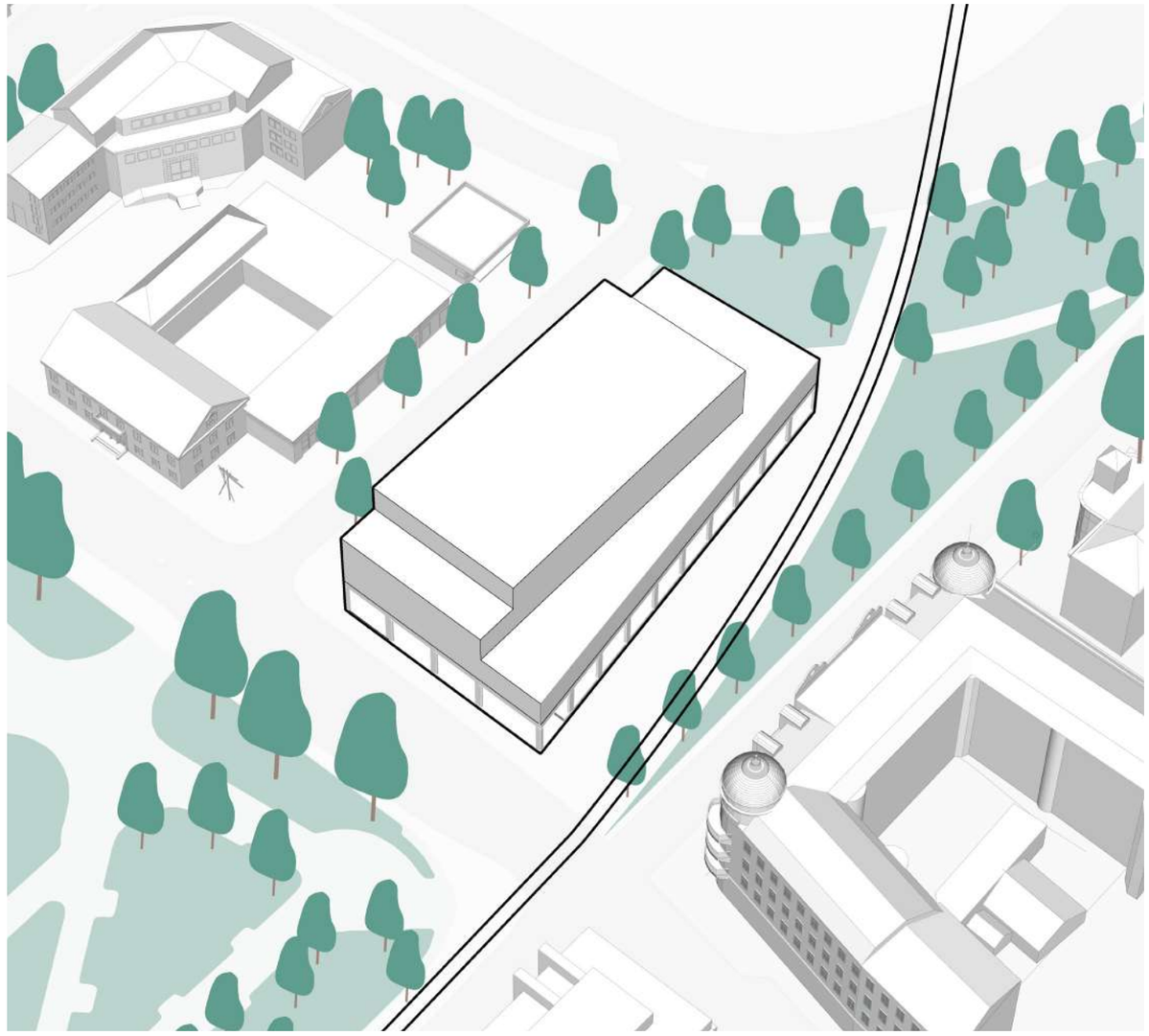
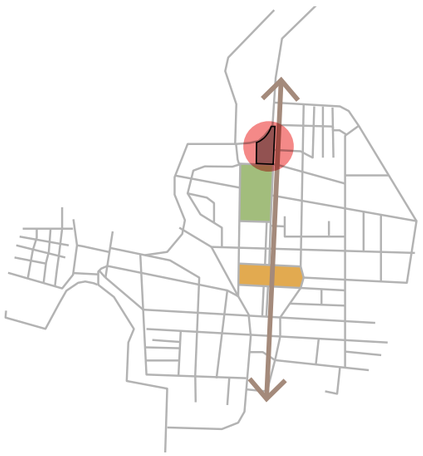
HEALING
KUNGSPLAN

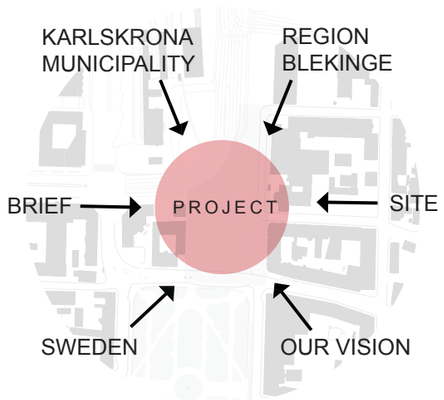


GROUP 6
ELVIRA KOMAN & MATILDA SVENSSON

CHALMERS UNIVERSITY OF TECHNOLOGY
FUTURE VISIONS FOR HEALTHCARE ARK263

WHAT?





...ARE YOU VIEWING?

This is a project proposal called ”Healing Kungsplan” - a health centre located in Karlskrona, Blekinge, Sweden.

The building contains premises for healthcare, women’s care, childcare, dental care, rehab care and common areas, as well as project specific additions.

...SETTING?

The project is located on the island of Trossö, which is also Karlskrona’s city centre.

Karlskrona was placed on the UNESCO world heritage list in 1998 because the city is *”an outstanding example of late 17th-century planned naval city”*. The baroque plan and naval impact makes this setting unique.

The project site Kungsplan (red) is located by the city entrance from the mainland, and next to the main masterplan axis (brown). Just south of the site the baroque Hogland’s park (green) is situated as well as the main square Stortorget (orange).

...REQUIREMENTS?

There are a number of requirements and preconditions along several visions to be translated into the proposal - from pervasive goals like Agenda 2030 to project specific.

These are the main requirements for the task:

- *Enhance Karlskrona’s main urban axis.*
- *Take care of the history of the place (greenery, railway tracks and the open space).*
- *Let the Fribergska huset dominate in scale.*
- *Adapt to the city plan and the neighborhood structure that exists on Trossö.*
- *Considering that the site has no backsides.*
- *Active ground floor, elevated due to flooding.*
- *Challenge brief and add new functions.*
- *Good, healing focused and welcoming environment.*

...VISIONS?

Region Blekinge:
”Attractive, health-promoting and sustainable healthcare building with the human in focus”.

Karlskrona municipality:
”Create a high quality contemporary architecture addition, that will add value to the baroque city plan and strengthen the entrance to the city”.

Our vision:
”We want to explore and propose a contemporary, high quality building worthy of Kungsplan focusing on respecting, complementing and healing the site, adding a building to support users and stand the unknown”.

WHERE?

KUNGSPLAN THEN AND NOW

Karlskrona was founded in 1680. At that point Kungsplan was still seabed.

In 1813 filling of ground founded our site. Over the years the layout has been altered many times. However, the one constant feature of a green open space has survived, annualy reducing in size, but is still present.

By 1927 Kungsplan had developed to a park and playground for people.

In 1975 the development of the main road *Österleden* caused some major changes on the site. For example the northern part of Kungsplan was cut off, and an on site historical naval railtrack was rearranged. Kungsplan was vehicle-centered.

Today Kungsplan is unsettled, used as a bus stop square, about to be altered again.

The direct surrounding buildings are high quality jugent architecture buildings as well as one modern restaurant building.

1680

1813

1927

1975

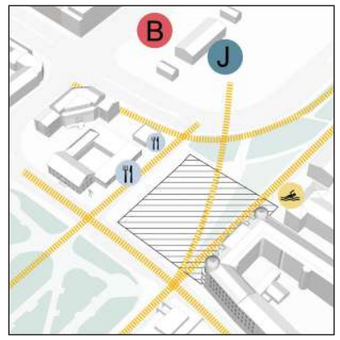
BUS SQUARE

BATH

FRIBERGSKA

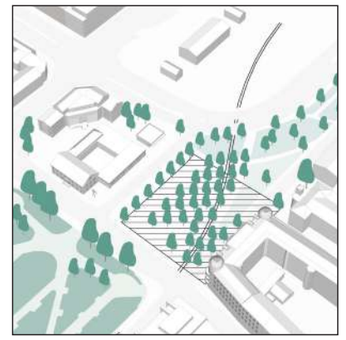
PARK

SITE ANALYSIS



QUALITIES

Movement to target points in the direct surroundings are towards the station, the bath and the restaurants.

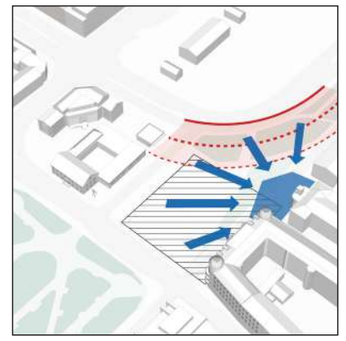


GREEN

The green features consists of linden trees of varying sizes and Hogland's park.

ENTRANCE

The site is an entrance to the city, Österleden is the only road from main land.

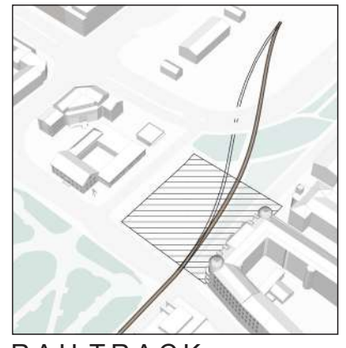


RISKS

Flooding is to be expected, lowest parts of the site is in east. Noise from Österleden affects the northern part of the site.

HISTORY

The surrounding buildings are characteristic buildings representing their time.



RAILTRACK

The naval railtrack extends from north to south, partly across the site. Along the track some parts has been dissorted.

HOW?

DESIGN STRATEGIES

We have a toolbox of 9 strategies in 3 categories - site, brief and building - to work with in this project. Sustainability permeates all categories. As an external tool we have worked with a Green Index (by Liljewalls), which covers important sustainability aspects. The green index will be evaluated lastly. These strategies will reaccur throughout this booklet.

GREEN INDEX

Green index is used as a guiding tool for prioritizing sustanability measures. Green index is an average of scored parameters.

PARAMETERS

Climate
Indoor environment
Social sustainability

SITE

USE CONTEXT

Exssisting qualities in the context will be used to support the new building, and the new building will support the context.

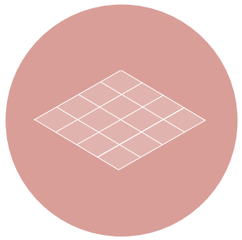
GREEN SURFACES

Green surfaces on the site as well as on the building will buffer water in a flooding scenario.

RELATE TO SCALE

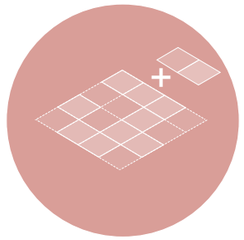
Stand out or blend? Relating to scale means adapting to the scale of the context.

BRIEF



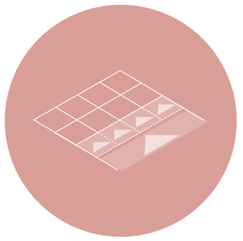
GRID STRUCTURE

A grid will generate a general structure, able to stand changes into new functions.



SYNERGIES

Synergies are created by adding functions complementing the given ones. Structural generality allows elasticity.



FUTURE USE

Future use of the building will be secured by the possibility to devide without altering vertical connections.

BUILDING

RHYTHM

The exterior expression will be generated by working with a rhythm of detailing levels.

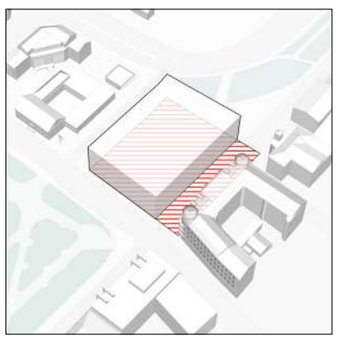
TERRACING

Integrated terracing on the ground floor will create an invitning base feature when entering the building.

WOOD

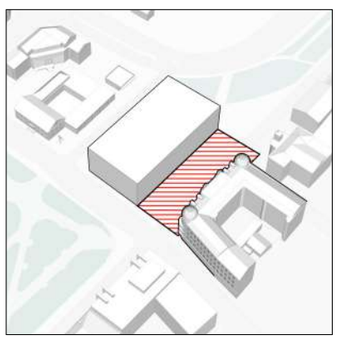
Wood is the suitable alternative in a healing environment and used when possible.

THIS WAY!



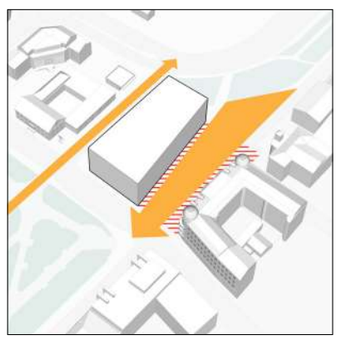
1. START

The buildable area streches from the restaurants in the west to Fribergska in the east (red area).



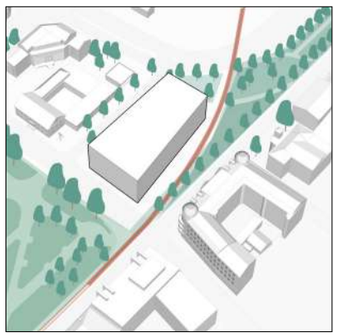
2. RESPECT

The experience of Fribergska is dependent on having an open area in front of it. To respect Fribergska in the cityscape an open space is therefore kept. The open space is a public square.



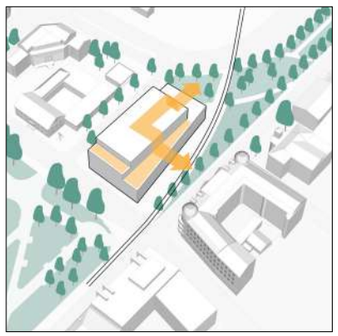
3. DIRECT

The volume is skewed from the open north to where the city gets more dense in the south. This works as a funnel from the Karlskrona entrance to the city, enhanced by the building. The mid park axis follows the volume.



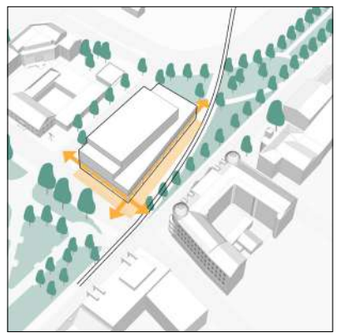
4. ENHANCE

Green structures are kept and enhanced (trees moved when neccesary). The old railtrack is a historic layer and is therefore restored to original position as a part of a proposed measure taken through the whole city.



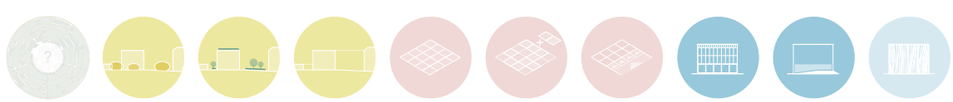
5. ADJUST

The volume is adjusted to meet the scale of Fribergska and the city entrance with lower parts. Lower parts creates rooftop terraces viewing the city, the sea and the park from a new angle.



6. CONNECT

The ground floor is connected to the surrounding by a characteristic colonnade - creating a semi-public space between outside and inside in a human scale.

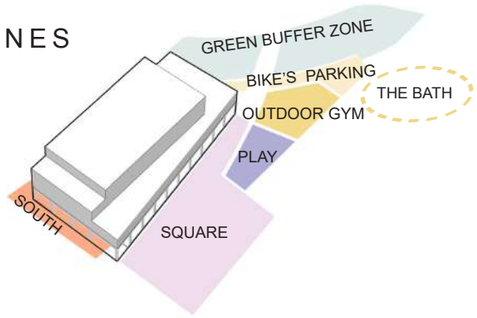


SITE PLAN

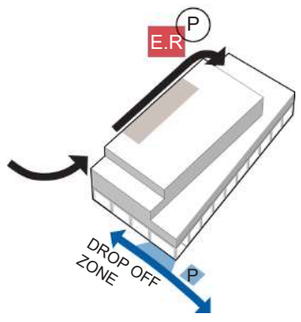
A green wedge creates a buffer zone (permeable surface) to manage flooding, noise and habitat for fauna. The square (reused paving stones) and wedge are a people's zone. The healed railtrack narrates orientation and stories. Landbron is redesigned to a one way street for other traffic.

An important context connection is established in an activity zone streching from bath to outdoor gym and play to our proposed indoor gym and rehab. Outdoor physical activity promotes health for all.

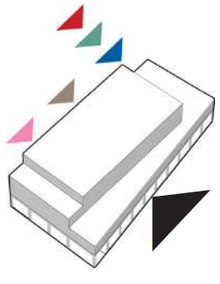
ZONES



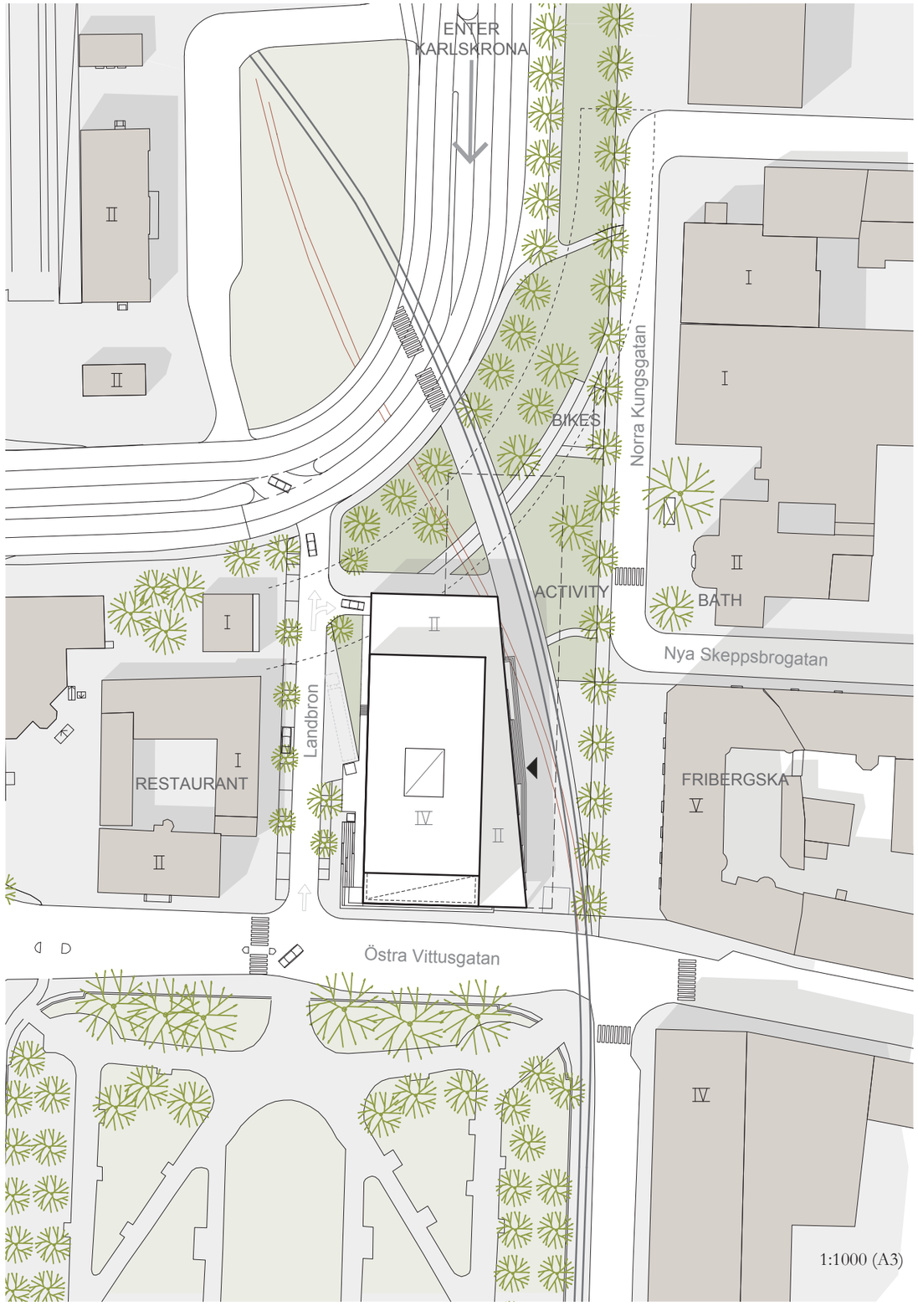
TRAFFIC



ENTRANCES



- VISITOR
- STAFF
- GOODS
- ER
- INFECTION
- MAIN



HEALING
GREEN SPINE

HEALING
RAILTRACK

ACTIVITY
Reference: 02LANDSKAP

BRIEF

CHALLENGE BRIEF

The task was to challenge the given brief in order to use the space efficient and add new functions.

This is how it's made step by step:

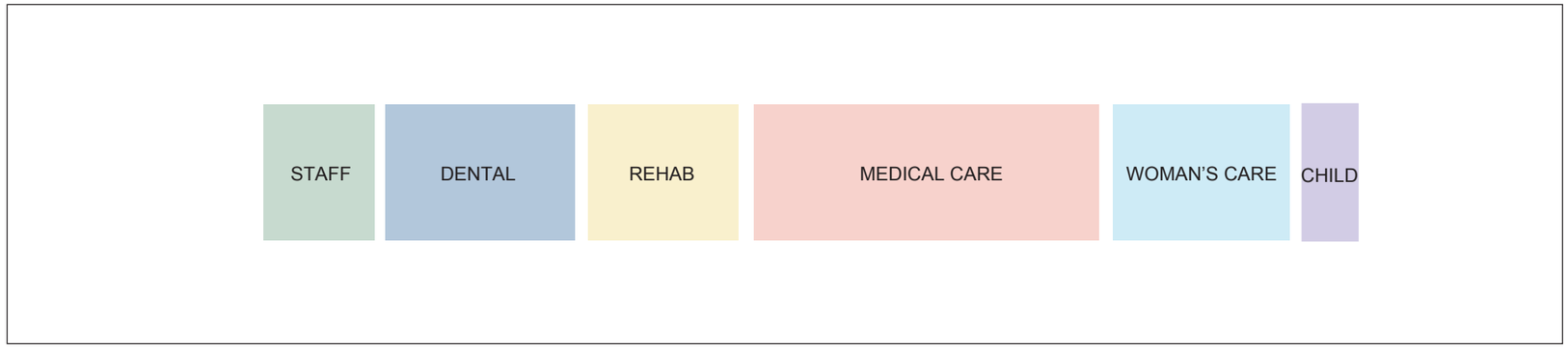
1. By analyzing each unit in detail and identifying common functions among the units we propose a functions for share. This applies to receptions, waiting areas, administration, conference, sampling, WC and specific special equipted rooms. Share of functions makes it space- and staff efficient.

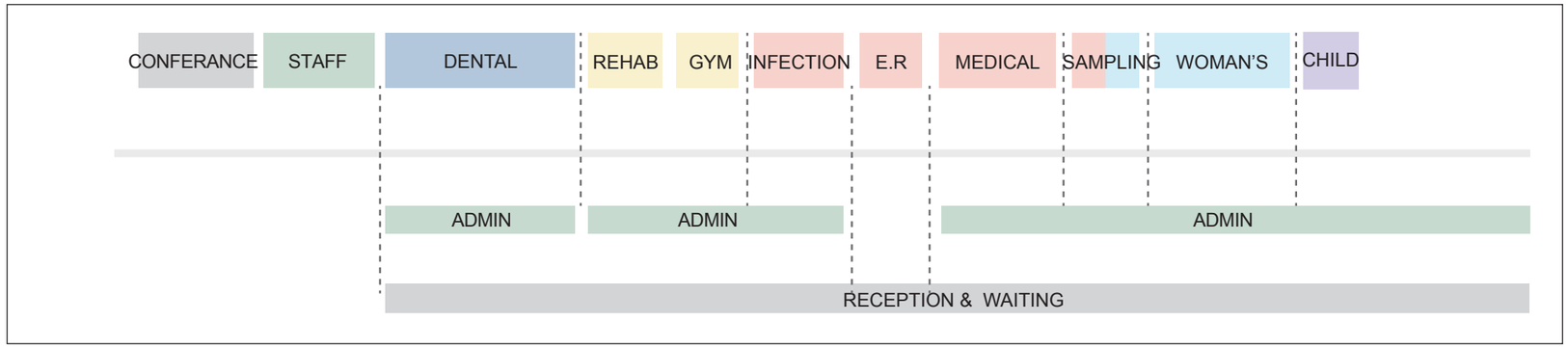
By separating examination from administration in exam rooms the occupation is expected to be halved, opening up for higher utilization in less rooms. A future scenario with increased E-health or care-in-home will probably lead to less exam rooms and more administration. This applies to medical care, which is the unit with the highest expected out-of-building-sourced activity.

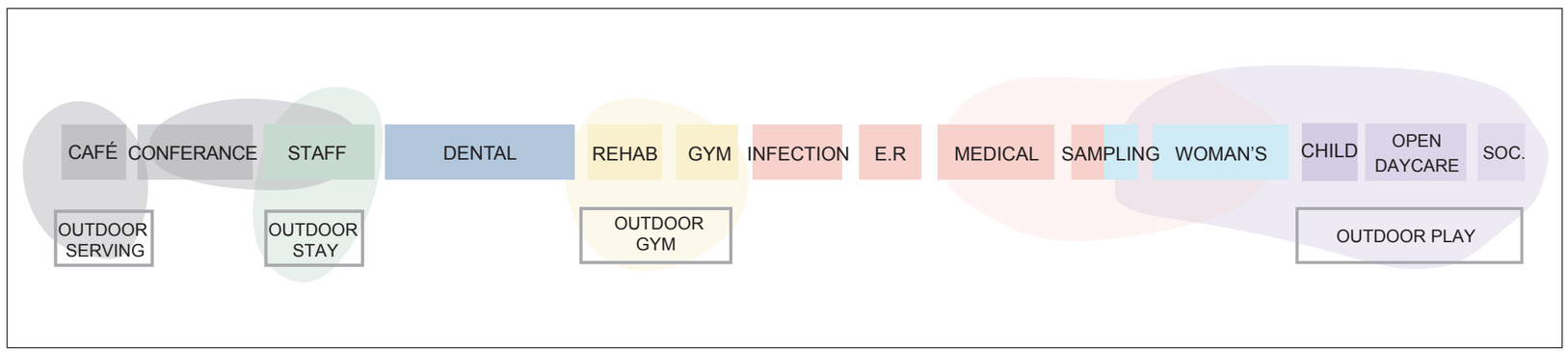
2. After space reductions and further analyze of the given units we propose added functions who supports the units. In this project we find it suitable to add *open day care* and *office for social service*, which together with women's care and child care creates a *family centre*. In the same manner the rehab unit is strenghtened by making the required gym *public,* opened after rehab care hours in existing premises. In order to invite the public to the building a *café* is added.

3. To connect the indoor spaces (rehab/gym, café and family centre) with the outdoors we propose supportive outdoor areas.

Synergies means *combined power of things when they are working together that is greater than the total power achieved by each working separately.* Synergies are created in the last step when reduced, shared and added areas are combined.



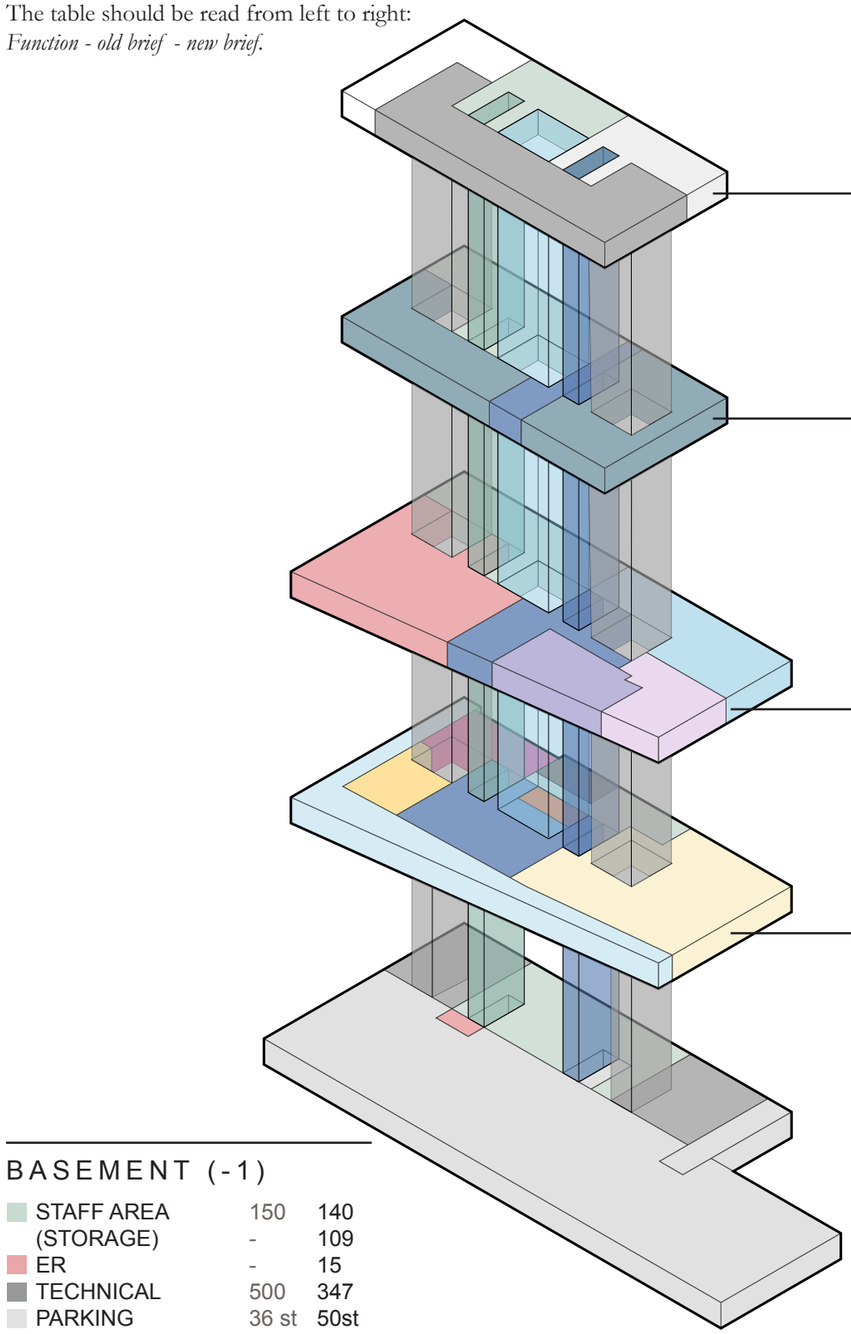




BRIEF

UNITS IN VOLUME

BTA above ground: 4496
The table should be read from left to right:
Function - old brief - new brief.



STAFF (+ 3) 785 BTA

STAFF ROOM	160	149
CONFERENCE	110	110
TECHNICAL	300	339

DENTAL (+ 2) 937 BTA

VISITOR AREA	-	39
DENTAL CARE	527	290
STAFF AREA	-	128
TECHNICAL	-	56

HEALTH (+1) 1520 BTA

VISITOR AREA	-	95
MEDICAL CARE	792	265
WOMENS CARE	301	177
CHILD CARE	109	79
OPEN DAY CARE	-	148
STAFF AREA	-	176
TECHNICAL		56

ENTRANCE FLOOR (0) 1254 BTA

COLONNADE	-	-
VISITOR AREA	-	187
RECEPTION	-	25
CAFÉ	-	86
REHAB	359	303
INFECTION	25	77
GOODS, WASTE	48	46
STAFF AREA	-	62
TECHNICAL	-	62

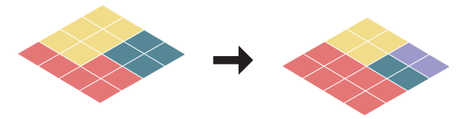
BASEMENT (-1)

STAFF AREA	150	140
(STORAGE)	-	109
ER	-	15
TECHNICAL	500	347
PARKING	36 st	50st

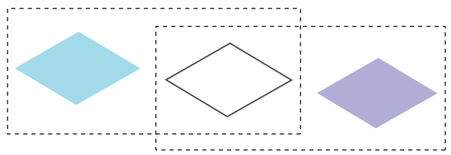
ELASTICITY WITHIN UNITS

When translating the brief into space we considered elasticity to be a suitable flexible solution for these kinds of units. It is important that the structure of the units can stand changes if the unit is expanding or reducing in size, that rooms could be shared and used by many and fit different needs. To acchieve this we work with a general room.

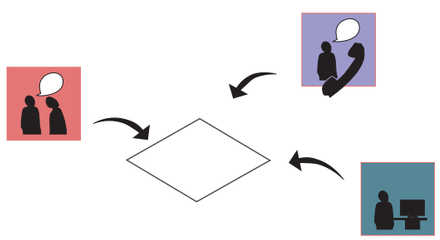
STAND CHANGES



SHARE ROOMS



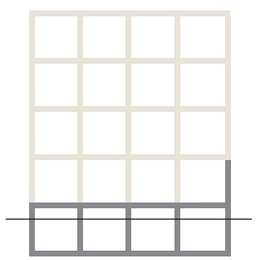
MULTI FUNCTIONAL ROOMS



PRINCIPLES

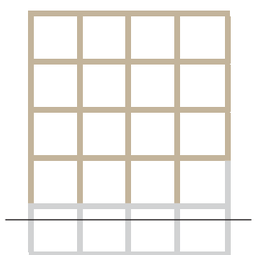
BUILDING STRUCTURE

The load bearing structure consists of a base part and a top part. The structure, vertical and horizontal, is a repeating system.



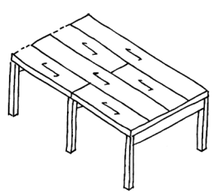
BASE

The base of the building is made of concrete, neccesary in order to waterproof.



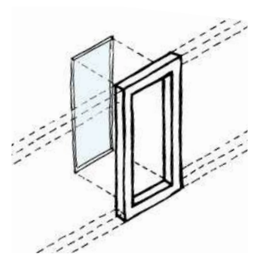
TOP

The top part is made of wooden elements. Wood is healing for the climate and human.



ELEMENTS

The elements consists of pillars, beams and slabs. The structural dimensions are oversized in order to withstand future changes.

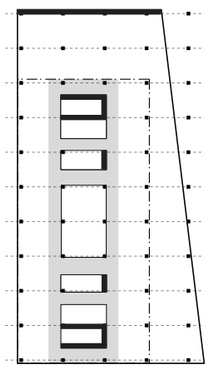


CASSETTE

The outer structure - the facade - is composed by a repeated cassette holding either fill or opening. The cassette harmonize with the idea of structural generality.

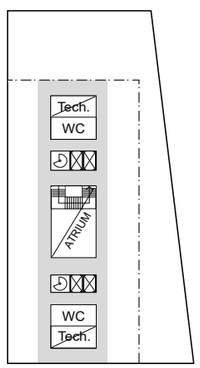
PLAN STRUCTURE

The floorplans are structured by four principles that applies to all floors. This makes the building rational as well as easy to understand when in use.



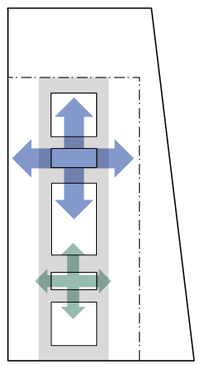
GRID

The plan is arranged according to a 5,8 by 7 metre grid. The north wall (floor 0, +1) and sides of shafts works as stabilizing concrete elements needed for the wooden construction.



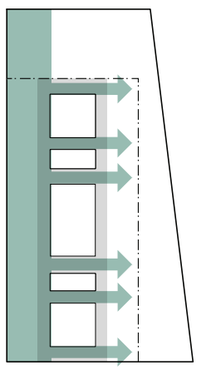
CORE

The core consists of an atrium with stairs, lifts in two blocks, fire escape stairs, WC and technical shafts. Unblocked corridors around these elements makes it possible to move through the core.



ACCESS

There is one block of lifts for each user group - visitors and staff. The visitors lift is placed central in the building to make it easy to access from all floors. The staff has one bigger lift for goods.



STAFF

The base for staff is along one side. The administration and support functions are located in staff-only common areas to promote teamwork, learning and enables exam rooms utility.

VIEW FROM NORRA KUNGSGATAN

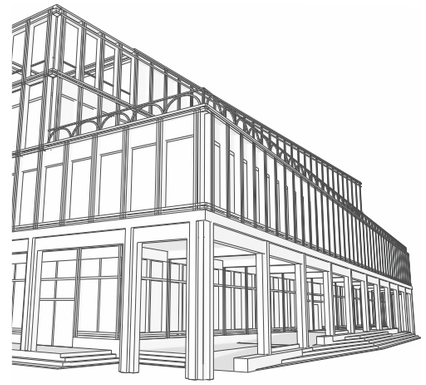
ENTRANCE FLOOR

The elevated entrance hall is reached by stairs or integraded ramps. In the entrance hall there is a common reception and main space for waiting. The rehab/gym has a visual connection to the activity zone, late opening hours will lead to eyes on the park at night.

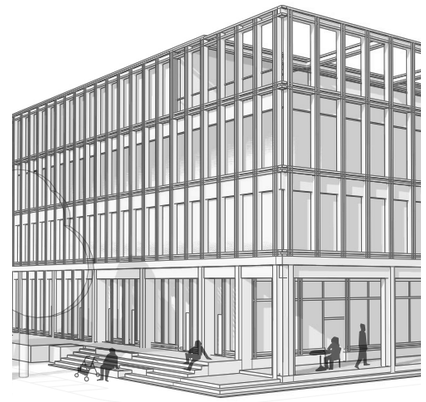
A new feature, a separate infection unit, have direct entrances if needed for contagoius or sensitive patients. If not needed, the premises can be used for medical care, seasonal vaccinations etc.

The café has internal connection to the hall. It attracts the public, maybe when passing to the station. The outdoor serving in south-west connects the ground floor to the other restaurants and the park mid axis through Landbron.

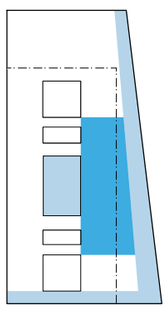
COLONNADE



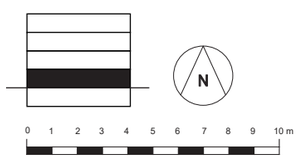
TERRACING



ORIENTATION

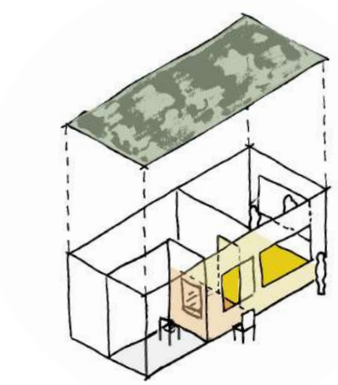


When entering the colonnade visitors will end up at the main entrance. The entrence hall has clear visible directions to find another floors.
If help is needed receptions staff are present, even if self-check in is used.



PRIVACY

Public reception exposed from entrance, but with zones for privacy.



HEALTH (+1)

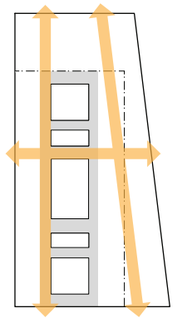
The first health floor stores medical- and women's care with a common sampling unit, located with close access to the stairs for easy use. These areas can also work for 2 health teams (working over the traditional boundaries, for example as 1 mental and 1 physical team).

The exam and admin are separated between the exam areas. Admin areas are desk-space, cell office and casual chat. Bigger meetings are held in chat rooms or conference areas.

Women's-, child-, open daycare and social service office are connected closely to promote a good staff teamwork for visiting families.

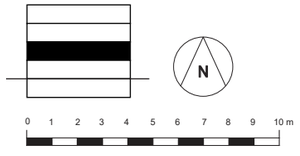
FAMILY

Family in center supported by family central.



OUTLOOKS

Openings at corridor ends as well as across the core easens orientation. Opening placement by patient lifts easens wayfinding through visual connection.



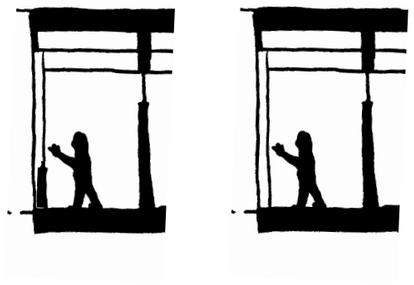
- MEDICAL CARE
- WOMENS CARE
- CHILD CARE
- OPEN DAY CARE
- STAFF AREA
- TECHNICAL

GLASS AND WOOD

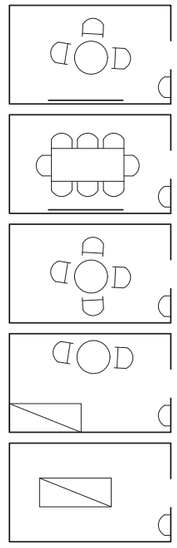
Reference: VILLA Perneel Osten Architecten

PRIVACY

Sill height on the inside where privacy is needed. Glass from roof to floor in the more public areas



GENERAL ROOM 13 m²



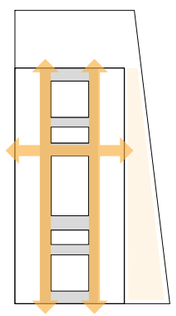
- DIGITAL EXAM
- DIGITAL MEETING
- CHAT
- CHAT + EXAM
- EXAM

DENTAL (+2)

The second health floor stores the dental care unit. On this floor the patients have the possibility to wait for their appointment outdoors. All treatment rooms have generous daylight.

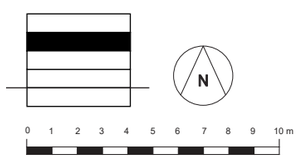
The location of support functions - administration, laboratory and x-ray, sterile rooms and storages promotes an efficient workflow.

If the dental unit would like/need a seperate reception it can be arranged close to the stairs and lifts.



ROOF - FLOOR

The building volume generates rooftop terrace areas. All other roof areas have green sedum surfaces.



DENTAL CARE
STAFF AREA
TECHNICAL

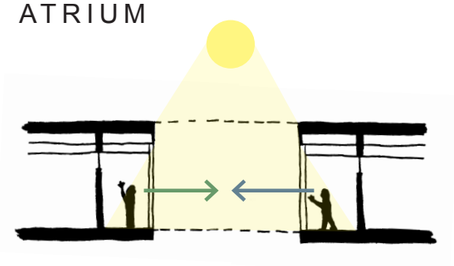
CEILING

Reference: WIDC Ed White

DAYLIGHT ABOVE

Reference: SPORTS CENTER Atelier Zündel Cristea

ATRIUM



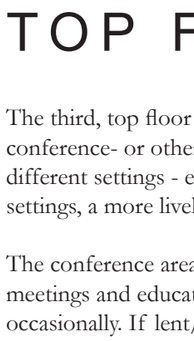
INTERIOR

This is an illustration of the communication areas on the dental floor. Windows at the end of the corridors easens orientation and the waiting room nisch brings variation. You can also see how the atrium and the over light windows gives indirect daylight to the core.

TOP FLOOR (+3)

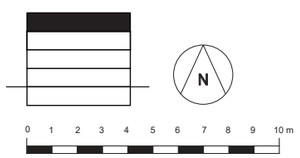
The third, top floor is reserved for staff and conference- or other guests. The staff areas have different settings - either smaller livingroom-like settings, a more lively cantina or an outdoor terrace.

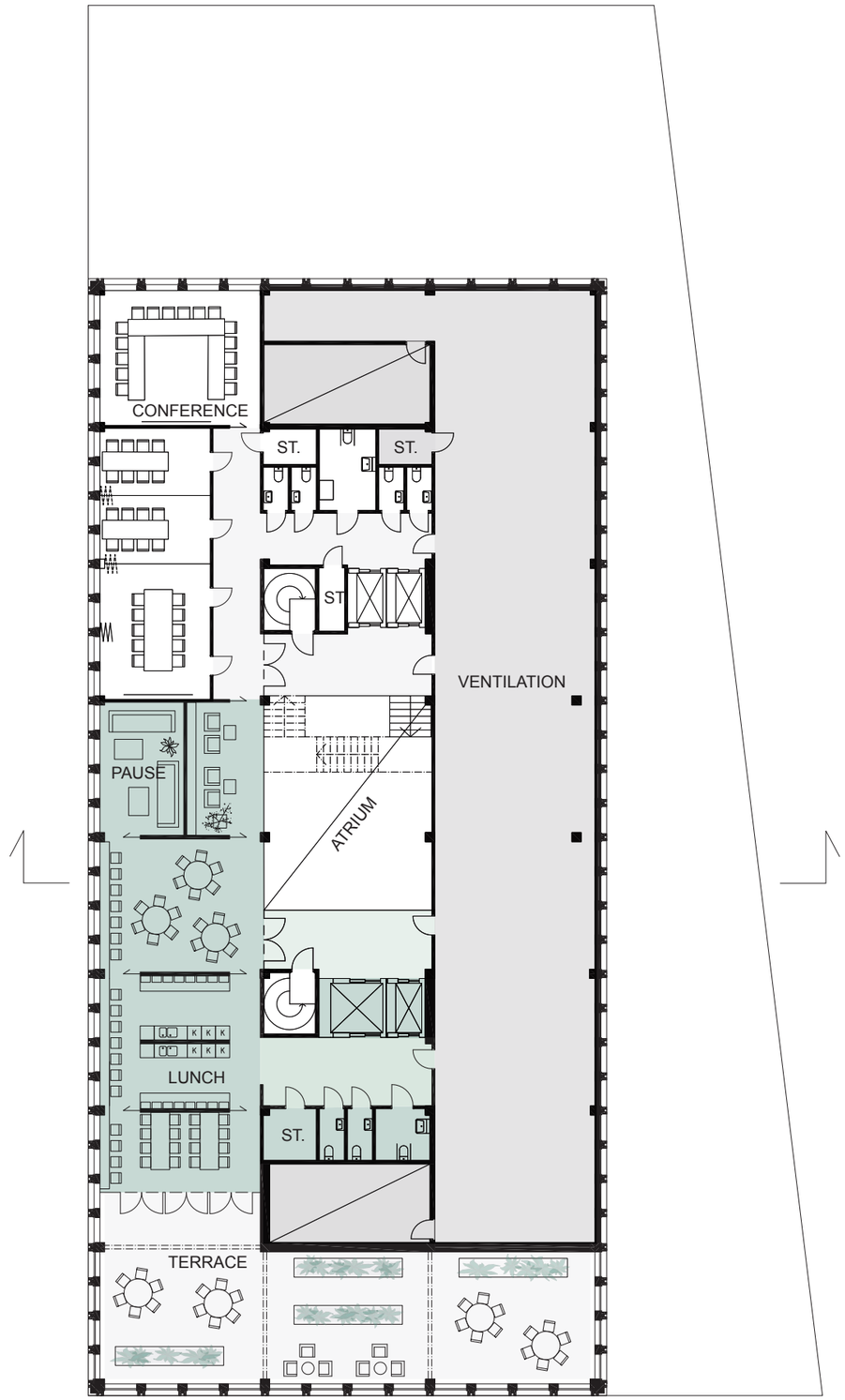
The conference areas can be used for internal meetings and educations or lent/rented out occasionally. If lent/rented out it works as a separate unit. The staff- and conference areas could be shared as extensions of either function if needed.



VIEWS

The integration of a rooftop terrace aims to provide well needed healing space for staff on breaks. The terrace has views over Karlskrona city, the sea and the park.





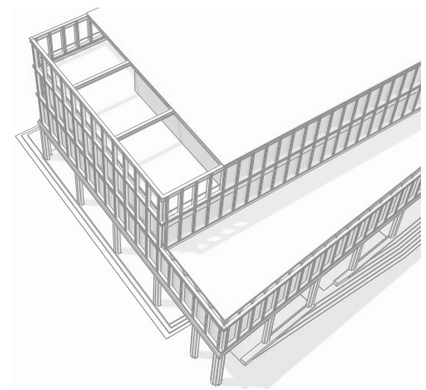
STAFF ROOM
CONFERENCE
TECHNICAL AREAS

TERRACE VIEW (SOUTH)

INTERIOR ATMOSPHERE

Reference: CASA NORD Jun Igarashi

TERRACE IN VOLUME



BASEMENT (-1)

The basement is used for support functions - car parking, technical areas, staff changing rooms and storage. The basement is expanded beyond the footprint of the building.

Because of flooding risks the basement is waterproof. To prevent a flooding situation obstacles of garage doors and doors will hopefully delay water filling the basement.

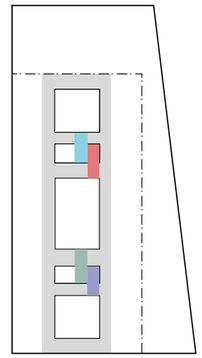
By placing the ER inside the building integrity can be maintained for patients and weather conditions will not cause discomfort. If the flooding situation is severe and has filled the basement the ambulance can use the lifting table on the entrance floor's loading dock for pickup.

1:400 (A3)

FUTURE POSSIBILITIES

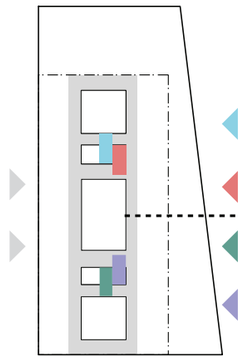
The building shall be able to withstand for ages and, if needed, altered, but not demolished. The generality of the structure will hopefully only lead to smaller alterations. With the proposed core and principles for division of floors fully or partly the building can stand changes in a future scenario.

In the floorplan below we show a scenario of change to two offices. As a result of the grid and the general rooms only small adjustments are needed.



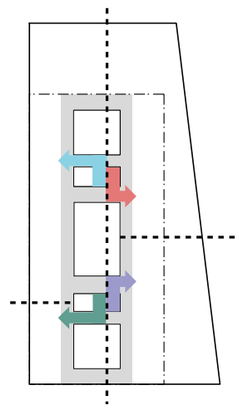
LIFTS

The lifts can be opened on both sides. This generates 4 separate lifts, proofing for the future.



ENTRANCE

The entrance situation can either be common or divided. There is also a possibility to enter from the west side of the building.



DIVISION

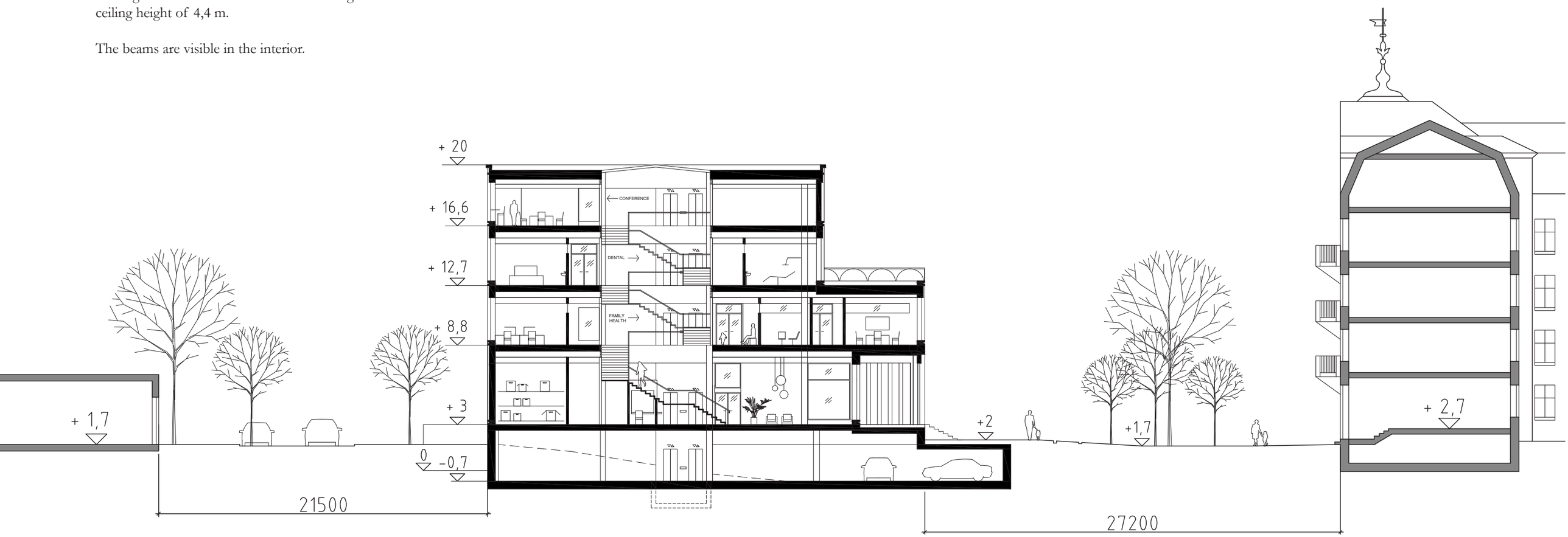
On one floor this lift setting could generate 4 separate functions, still having support functions like WC and shaft.

SECTIONS

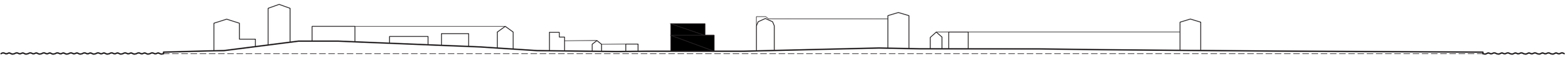
The sections shows the building's relation to the surroundings - both at site and on the island.

The ground floor is elevated + 1,3 m compared to existing street level. The entrance hall has a generous ceiling height of 4,4 m.

The beams are visible in the interior.



1:250 (A3)



1:2500 (A3)

FACADE

The facade composition of base+top+cassettes induces rhythm, hierarchy and scale to make the building a complement to the context. The base is robust and the top is lighter.

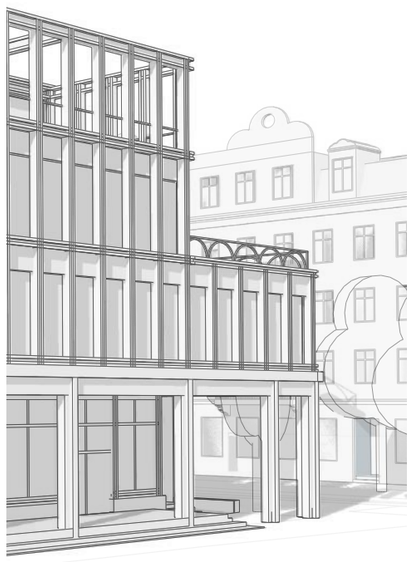
We think that a transition from concrete (dense) to wood and glass (light) is a way to meet the surroundings with softness.

The northern concrete facade has an engraved relief as an integrated piece of art (see perspective on last page).

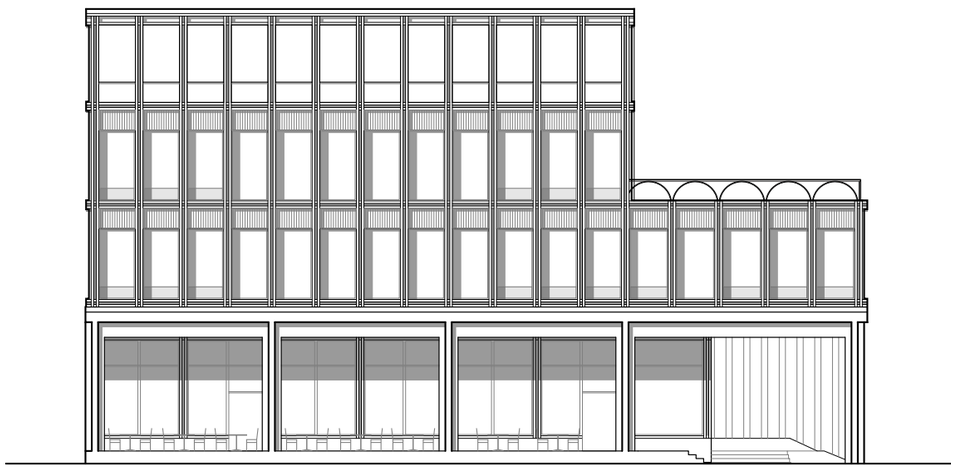
The wooden cassettes either have a window, a blind window (filled part) or a frame with handrails. By framing the rooftop terrace the volume remains cohesive.

The handrails on the terraces corresponds to the soft shapes of the jugent architecture around.

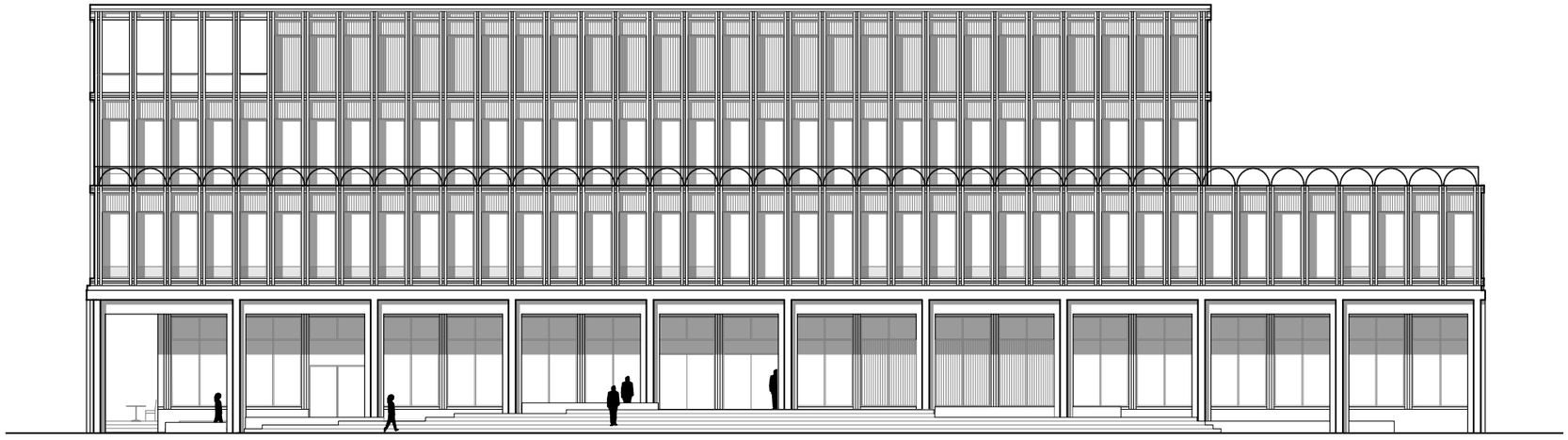
The open facade gives the inside generous daylight and views. To maintain integrity the glass in the facade has a mirror coat reflecting the context when looking in.



Perspective, Fribergska behind.



Facade to south 1:250 (A3)



Facade to east 1:250 (A3)

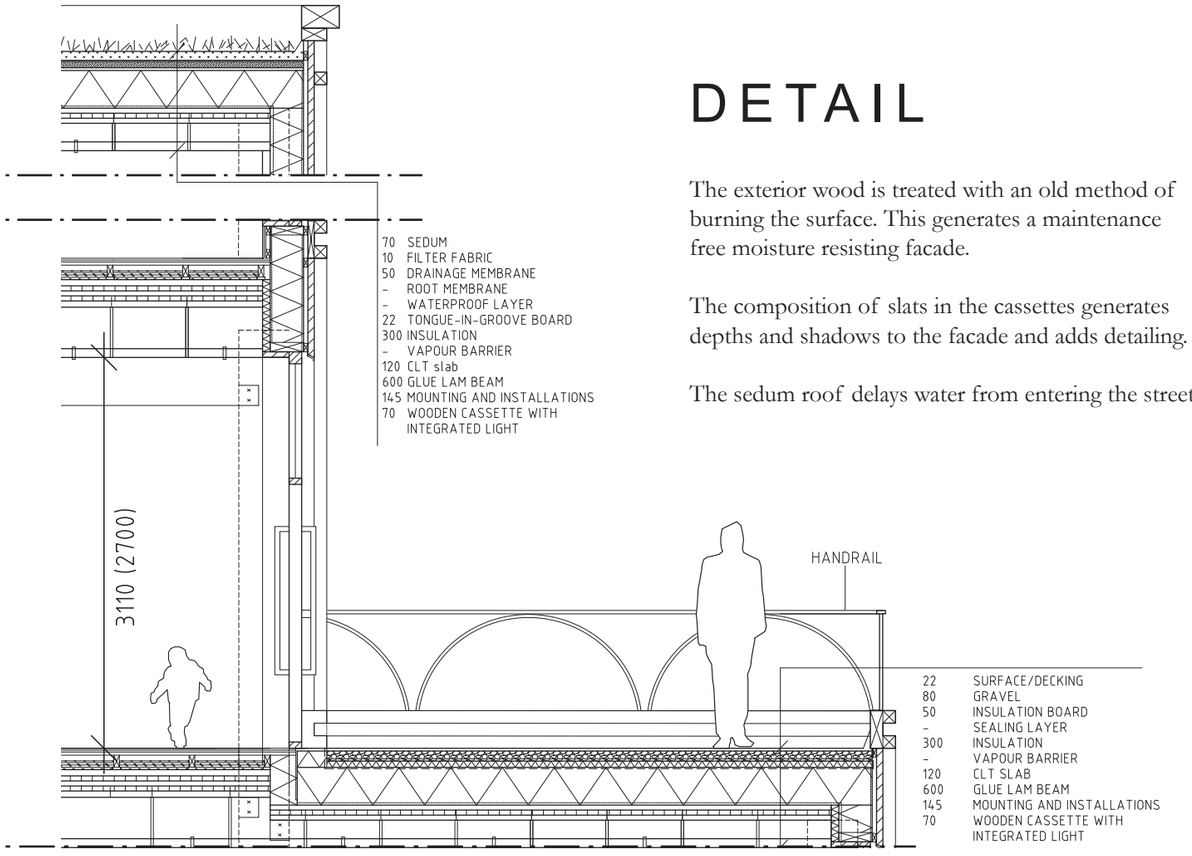
0 1 2 3 4 5 6 7 8 9 10 m

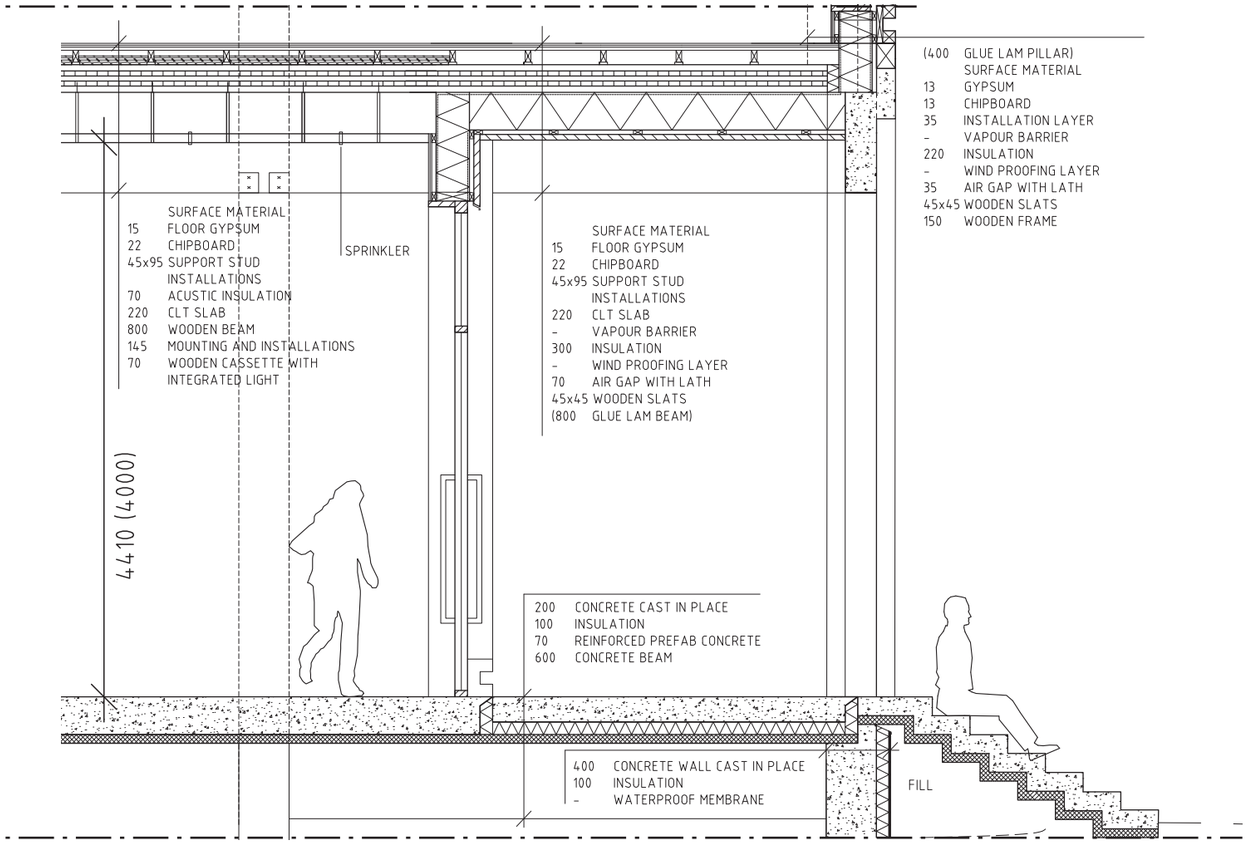
DETAIL

The exterior wood is treated with an old method of burning the surface. This generates a maintenance free moisture resisting facade.

The composition of slats in the cassettes generates depths and shadows to the facade and adds detailing.

The sedum roof delays water from entering the street.





WHAT ABOUT...

...GREEN INDEX?

The green index review: basically 5 parameters. We chose to limit ourselves to the 3 we thought were possible for us to work with based on the task.

This is how the project manage right now:
Climate (1/5 points):
1 p - climate wall.
Indoor environment (3/5 points):
1 p - outlooks, window visibility.
1 p - acoustics
1 p - flexibility in plans possible.
Social sustainability (5/5 points):
1 p - safety, orientation, integration, interaction.
1 p - closeness to green space, communications and service.
1 p - social and spacial connection.
1 p - clear identity, character, historic anchor and storytelling for feeling of belonging.
1 p - health promotion through green space.

Green index: 1,8/3.

Challenges:
- Site restrictions makes waste material analysis less prioritized (climate).
- Basement, concrete.

Possible improvements in further work:
- knowledge of energy simulations (energy).
- detailing of interior - light, fixed furniture etc (indoor environment).

Tool: http://web.liljewall.se/greenindex/

...SETTING IN FUTURE?

Kungsplan is an interesting site with a lot of potential for the city, yet complicated for many reasons, mainly the flooding scenario.

Kungsplan is perfect as a target point, and we think instead of gathering vehicles Kungsplan should gather people, like it once did.

The question remains if an addition of a new building, even containing sensitive functions (healthcare) is preferred here at all?

During this process we've come back to this question - how will this elevated health centre be reached by boat when the day has come for Kungsplan to regress to seabed?

...VISIONS?

Our addition to Kungsplan respects the cityscape and context by adapting, healing and enhancing existing features and directions. It makes the layers of history visible, highly valued considering the unique world heritage setting. The exterior corresponds to rhythm. High quality detailis is the only worthy addtion to Kungsplan, we state.

We propose a building structure taking into account the unknown future. Spacial settings for healing, wood, light and visible connectons along activities provides possibilities to promote health; physical as well as mental support.

But in the end, archicecture and enclosed space can only do so much. The real healing comes from the interaction of humans.